

**BRABINS CHARITABLE TRUST**

**Building Specification in connection with Remedial Repair works at**

**John Brabins Almshouses  
29 & 33 Windy Street, Chipping, PR3 2GD**



Project Managers Architects Quantity Surveyors Building Surveyors CDM Advisors

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**(LM/1608/11/04)**

**Prepared by: Luke McKevitt**

**Date: 10/8/18**

**Checked by: Chris Bell**

**Date: 10/8/18**

# 1.00 Preliminaries

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## A10 PROJECT PARTICULARS

- 110 THE PROJECT
- Name: John Brabins Almshouses - Remedial Repair Works.
  - Nature: Remedial Repair Works.
  - Location: John Brabins Almshouses. 29 & 33 Windy Street, Chipping, PR3 2GD .
  - Length of contract: 4 weeks.
- 120 EMPLOYER (CLIENT)
- Name: Brabins Charitable Trust - John Brabins Almshouses.
  - Address: 21 Kirklands, Chipping, PR3 2GN.
  - Contact: Catherine Fleming.
  - Telephone: N/A.
  - E-mail: catherine.fleming5@btinternet.com.
- 130 PRINCIPAL CONTRACTOR (CDM)
- Name: TBA.
  - Address: TBA.
  - Contact: TBA.
  - Telephone: TBA.
  - E-mail: TBA.
- 140 ARCHITECT/ CONTRACT ADMINISTRATOR
- Name: JYM Partnership LLP.
  - Address: Oak House, 28 Sceptre Way, Bamber Bridge, Preston, PR5 6AW.
  - Contact: Chris Bell.
  - Telephone: 01772 323 666.
  - E-mail: chris.bell@jympartnership.co.uk.
- 150 PRINCIPAL DESIGNER
- Name: As 140.
  - Address: As 140.
  - Contact: As 140.
  - Telephone: As 140.
  - E-mail: As 140.

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## A11 TENDER AND CONTRACT DOCUMENTS

### 110 TENDER DRAWINGS

- The tender drawings are: Refer to Appendix A of the Tender Document.

### 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.

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## A12 THE SITE/ EXISTING BUILDINGS

- 110 THE SITE
- Description: Residential.
- 120 EXISTING BUILDINGS ON/ ADJACENT TO THE SITE
- Description: Existing buildings within the site are on Windy Street. Surrounding areas are primarily residential with a Primary School, Chipping Brook and Churchyard.
- 140 EXISTING UTILITIES AND SERVICES
- Drawings: (Information shown is indicative only): None Available.
  - Other information: None Available.
- 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: Contact JYM.
  - Other documents: .
  - Arrangements for inspection: .
- 200 ACCESS TO THE SITE
- Description: The site is accessed off Windy Street.
  - Limitations: None.
- 210 PARKING
- Restrictions on parking of the Contractor's and employees' vehicles: On street parking only.
- 220 USE OF THE SITE
- General: Do not use the site for any purpose other than carrying out the Works.
  - Limitations: Residential Area.
- 230 SURROUNDING LAND/ BUILDING USES
- General: Adjacent or nearby uses or activities are as follows:
    - Residential.

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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:
  - Refer to PCI Document.
- 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: Please contact JYM to arrange a site visit.

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## A13 DESCRIPTION OF THE WORK

### 120 THE WORKS

- Description: External repointing using lime mortar, internal re-plastering using lime plaster, replacement of lead flashings to chimney stacks, replacement of damaged stone flags on front and rear roof pitches, removal of part of ridge beam above 29 Windy Street and replacement with new timber..

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## A20 JCT MINOR WORK BUILDING CONTRACT (MW)

### JCT MINOR WORKS BUILDING CONTRACT

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

### THE RECITALS

#### First - THE WORKS AND THE CONTRACT ADMINISTRATOR

- The work comprises: Remedial Repair 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 Work schedules.

#### Third - PRICED DOCUMENTS

- Documents to be priced or provided by the Contractor: Work schedules.

### 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: See clause A10/130.

### CONTRACT PARTICULARS

#### Fourth Recital and Schedule 2 - BASE DATE

- Base date: 10 days before the date for return of tenders.

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

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

#### Fifth Recital - CDM REGULATIONS

- The project is not notifiable.

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Seventh Recital and Schedule 3 - SUPPLEMENTAL PROVISIONS

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

- Works Commencement date: TBC.
- Date for completion: TBC.

Clause 2.8 - LIQUIDATED DAMAGES

- At the rate of £1000 per calendar week or pro-rata thereto.

Clause 2.10 - RECTIFICATION PERIOD

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

Clause 4.3 - INTERIM PAYMENTS

- Interim Valuation Dates:
  - The first Interim Valuation Date is: On completion.
  - Thereafter at intervals of: On completion.
- Payments due prior to practical completion:
  - Percentage of total value of the work etc.: 95 per cent.
- Payments becoming due on or after practical completion:
  - Percentage of the total amount to be paid: 97½ per cent.

Clause 4.3 and 4.8 - FLUCTUATIONS PROVISION

- The following fluctuations provision applies: No fluctuations provision applies.
- Where Schedule 2 applies, the percentage addition (paragraph 13) is .

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

- The required level of cover for any one occurrence or series of occurrences arising out of one event:
  - Not less than: £5,000,000.

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

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

Clause 7.2 - ADJUDICATION

- The Adjudicator is: President or Vice President.
- Nominating body: Royal Institution of Chartered Surveyors.

Schedule 1 paragraph 2.1 - ARBITRATION

- Appointor of Arbitrator (and of any replacement): President or a Vice president of the: The Royal Institution of Chartered Surveyors.

**THE CONDITIONS**

SECTION 1: DEFINITIONS AND INTERPRETATION

1.4 - RECKONING PERIODS OF DAYS

- Amendments: None.

1.8 - APPLICABLE LAW

- Amendments: None.

SECTION 2: CARRYING OUT THE WORKS

SECTION 3: CONTROL OF THE WORKS

SECTION 4: PAYMENT

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- 325 SECTION 4: PAYMENT - CONTRACT AMENDMENTS
- 4 .3; Delete, the final date for payment of the certified sum shall be 14 days from the due date.  
Insert - The final date for payment of the certified sum shall be 28 days from the due date.
  - 4 .8.3; Delete, the final date for payment of the final payment (if any) shall be 14 days from its due date.  
Insert - The final date for payment of the final payment (if any) shall be 28 days from its due date.

SECTION 5: INJURY, DAMAGE AND INSURANCE

SECTION 6: TERMINATION

SECTION 7: SETTLEMENT OF DISPUTES

EXECUTION

- The Contract: Will be executed under hand.

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## 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 2 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 13 weeks.
  - Date for possession/ commencement: See section A20.

### PRICING/ SUBMISSION OF DOCUMENTS

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

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250 PRICED DOCUMENTS

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

310 TENDER

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

500 TENDER STAGE METHOD STATEMENTS

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

510 ALTERNATIVE METHOD TENDERS

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

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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: With the Tender.

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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.

599 FREEDOM OF INFORMATION

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

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## 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.
- 140 DRAWINGS
- Definitions: To BSRIA BG 6 A design framework for building services. Design activities and drawing definitions.
  - CAD data: In accordance with BS 1192.
- 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.

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160 TERMS USED IN SPECIFICATION

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

170 MANUFACTURER AND PRODUCT REFERENCE

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

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- 200 SUBSTITUTION OF PRODUCTS
- Products: If an alternative product to that specified is proposed, obtain approval before ordering the product.
  - Reasons: Submit reasons for the proposed substitution.
  - Documentation: Submit relevant information, including:
    - manufacturer and product reference;
    - cost;
    - availability;
    - relevant standards;
    - performance;
    - function;
    - compatibility of accessories;
    - proposed revisions to drawings and specification;
    - compatibility with adjacent work;
    - appearance;
    - copy of warranty/ guarantee.
  - Alterations to adjacent work: If needed, advise scope, nature and cost.
  - Manufacturers' guarantees: If substitution is accepted, submit before ordering products.
- 210 CROSS REFERENCES
- Accuracy: Check remainder of the annotation or item description against the terminology used in the section or clause referred to.
  - Related terminology: Where a numerical cross-reference is not given the relevant sections and clauses of the specification will apply.
  - Relevant clauses: Clauses in the referred to specification section dealing with general matters, ancillary products and execution also apply.
  - Discrepancy or ambiguity: Before proceeding, obtain clarification or instructions.
- 220 REFERENCED DOCUMENTS
- Conflicts: Specification prevails over referenced documents.
- 230 EQUIVALENT PRODUCTS
- Inadvertent omission: Wherever products are specified by proprietary name the phrase 'or equivalent' is to be deemed included.

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- 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 free of charge.

- 440 DIMENSIONS
- Scaled dimensions: Do not rely on.

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

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

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**DOCUMENTS PROVIDED BY CONTRACTOR/  
SUBCONTRACTORS/ SUPPLIERS**

- 630 TECHNICAL LITERATURE
- Information: Keep on site for reference by all supervisory personnel:
    - Manufacturers' current literature relating to all products to be used in the Works.
    - Relevant British, EN or ISO Standards.
- 640 MAINTENANCE INSTRUCTIONS AND GUARANTEES
- Components and equipment: Obtain or retain copies, register with manufacturer and hand over on or before completion of the Works.
  - Information location: In Building Manual.
  - Emergency call out services: Provide telephone numbers for use after completion. Extent of cover: twenty four hours seven days a week.

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## A32 MANAGEMENT OF THE WORKS

### GENERALLY

#### 110 SUPERVISION

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

#### 120 INSURANCE

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

#### 130 INSURANCE CLAIMS

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

#### 150 OWNERSHIP

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

### PROGRAMME/ PROGRESS

#### 210 PROGRAMME

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

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- 245 START OF WORK ON SITE
  - Notice: Before the proposed date for start of work on site give minimum notice of two weeks.
  
- 250 MONITORING
  - Progress: Record on a copy of the programme kept on site.
  - Avoiding delays: If any circumstances arise which may affect the progress of the Works submit proposals or take other action as appropriate to minimize any delay and to recover any lost time.
  - Key Performance Indicators:
    - Details: .
    - 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: 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): Contract Administrator.
  
- 280 PHOTOGRAPHS
  - Number of locations: All.
  - Frequency of intervals: Weekly.
  - Image format: Any.
  - Number of images from each location: As many as necessary.
  - Other requirements: None
  
- 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): 3 days.

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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.

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## 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.

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- 140 COMPLIANCE
- Compliance with proprietary specifications: Retain on site evidence that the proprietary product specified has been supplied.
  - Compliance with performance specifications: Submit evidence of compliance, including test reports indicating:
    - Properties tested.
    - Pass/ fail criteria.
    - Test methods and procedures.
    - Test results.
    - Identity of testing agency.
    - Test dates and times.
    - Identities of witnesses.
    - Analysis of results.
- 150 INSPECTIONS
- Products and executions: Inspection or any other action must not be taken as approval unless confirmed in writing referring to:
    - Date of inspection.
    - Part of the work inspected.
    - Respects or characteristics which are approved.
    - Extent and purpose of the approval.
    - Any associated conditions.
- 160 RELATED WORK
- Details: Provide all trades with necessary details of related types of work. Before starting each new type or section of work ensure previous related work is:
    - Appropriately complete.
    - In accordance with the project documents.
    - To a suitable standard.
    - In a suitable condition to receive the new work.
  - Preparatory work: Ensure all necessary preparatory work has been carried out.
- 170 MANUFACTURER'S RECOMMENDATIONS/ INSTRUCTIONS
- General: Comply with manufacturer's printed recommendations and instructions current on the date of the Invitation to tender.
  - Changes to recommendations or instructions: Submit details.
  - Ancillary products and accessories: Use those supplied or recommended by main product manufacturer.
  - Agrément certified products: Comply with limitations, recommendations and requirements of relevant valid certificates.

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- 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.

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- 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.

- 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.

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

- 430 WATER REGULATIONS/ BYELAWS CONTRACTOR'S CERTIFICATE
- On completion of the work: Submit (copy where also required to the Water Undertaker) a certificate including:
    - The address of the premises.
    - A brief description of the new installation and/ or work carried out to an existing installation.
    - The Contractor's name and address.
    - A statement that the installation complies with the relevant Water Regulations or Byelaws.
    - The name and signature of the individual responsible for checking compliance.
    - The date on which the installation was checked.

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

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**SUPERVISION/ INSPECTION/ DEFECTIVE WORK**

- 525 ACCESS
  - Extent: Provide at all reasonable times access to the Works and to other places of the Contractor or subcontractors where work is being prepared for the Contract.
  - Designate: Contract Administrator.
  
- 540 DEFECTS IN EXISTING WORK
  - Undocumented defects: When discovered, immediately give notice. Do not proceed with affected related work until response has been received.
  - Documented remedial work: Do not execute work which may:
    - Hinder access to defective products or work; or
    - Be rendered abortive by remedial work.
  
- 560 TESTS AND INSPECTIONS
  - Timing: Agree and record dates and times of tests and inspections to enable all affected parties to be represented.
  - Confirmation: One working day prior to each such test or inspection. If sample or test is not ready, agree a new date and time.
  - Records: Submit a copy of test certificates and retain copies on site.
  
- 610 DEFECTIVE PRODUCTS/ EXECUTIONS
  - Proposals: Immediately any work or product is known, or appears, to be not in accordance with the Contract, submit proposals for opening up, inspection, testing, making good, adjustment of the Contract Sum, or removal and re-execution.
  - Acceptability: Such proposals may be unacceptable and contrary instructions may be issued.

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**WORK AT OR AFTER COMPLETION**

- 710 WORK BEFORE COMPLETION
- General: Make good all damage consequent upon the Works.  
Temporary markings, coverings and protective wrappings: Remove unless otherwise instructed.
  - Cleaning: Clean the Works thoroughly inside and out, including all accessible ducts and voids. Remove all splashes, deposits, efflorescence, rubbish and surplus materials.
  - Cleaning materials and methods: As recommended by manufacturers of products being cleaned, and must not damage or disfigure other materials or construction.
  - COSHH dated data sheets: Obtain for all materials used for cleaning and ensure they are used only as recommended by their manufacturers.
  - Minor faults: Touch up in newly painted work, carefully matching colour and brushing out edges. Repaint badly marked areas back to suitable breaks or junctions.
  - Moving parts of new work: Adjust, ease and lubricate as necessary to ensure easy and efficient operation, including doors, windows, drawers, ironmongery, appliances, valves and controls.
- 720 SECURITY AT COMPLETION
- General: Leave the Works secure with, where appropriate, all accesses closed and locked.
  - Keys: Account for and adequately label all keys and hand over to Employer with itemized schedule, retaining duplicate schedule signed by Employer as a receipt.
- 730 MAKING GOOD DEFECTS
- Remedial work: Arrange access with Contract Administrator.
  - Rectification: Give reasonable notice for access to the various parts of the Works.
  - Completion: Notify when remedial works have been completed.

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## A34 SECURITY/ SAFETY/ PROTECTION

### 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: .
    - Precautions assumed: .
    - Specification reference: .
    - Drawing reference: .
- 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: .
    - Material: .
    - Specification reference: .
- 140 CONSTRUCTION PHASE HEALTH AND SAFETY PLAN
- Submission: Present to the Employer/ Client no later than 2 weeks prior to commencement.
  - 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: None.

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- 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: 33 Windy Street will be occupied during the external works whilst 29 Windy Street will be vacant.
  - 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.
  
- 190 OCCUPIER'S RULES AND REGULATIONS
  - Compliance: Conform to the occupier's rules and regulations affecting the site.
  - Copies:
    - Location: With Client contract.
    - Arrangements for inspection: With Contract Administrator.
  
- 200 MOBILE TELEPHONES AND PORTABLE ELECTRONIC EQUIPMENT
  - Restrictions on use:
    - No restrictions.
  
- 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.

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**PROTECT AGAINST THE FOLLOWING**

- 330 NOISE AND VIBRATION
  - Standard: Comply with the recommendations of BS 5228-1, in particular clause 7.3, to minimize noise levels during the execution of the Works.
  - Noise levels from the Works: Maximum level: TBA dB(A) when measured from TBA.
  - Equipment: Fit compressors, percussion tools and vehicles with effective silencers of a type recommended by manufacturers of the compressors, tools or vehicles.
  - Restrictions: Do not use:
    - Percussion tools and other noisy appliances without consent during the hours of 8am-9am & 5pm-6pm. Working hours during weekdays only.
    - Radios or other audio equipment or permit employees to use in ways or at times that may cause nuisance.
  
- 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.
  
- 380 FIRE PREVENTION
  - Duty: Prevent personal injury or death, and damage to the Works or other property from fire.
  - Standard: Comply with Joint Code of Practice 'Fire Prevention on Construction Sites', published by Construction Industry Publications and The Fire Protection Association (The 'Joint Fire Code').
  
- 390 SMOKING ON SITE
  - Smoking on site: Not permitted.
  
- 400 BURNING ON SITE
  - Burning on site: Not permitted.

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- 410 MOISTURE
  - Wetness or dampness: Prevent, where this may cause damage to the Works.
  - Drying out: Control humidity and the application of heat to prevent:
    - Blistering and failure of adhesion.
    - Damage due to trapped moisture.
    - Excessive movement.
  
- 420 INFECTED TIMBER/ CONTAMINATED MATERIALS
  - Removal: Where instructed to remove material affected by fungal/ insect attack from the building, minimize the risk of infecting other parts of the building.
  - Testing: carry out and keep records of appropriate tests to demonstrate that hazards presented by concentrations of airborne particles, toxins and other micro organisms are within acceptable levels.
  
- 430 WASTE
  - Includes: Rubbish, debris, spoil, surplus material, containers and packaging.
  - General: Minimize production. Prevent accumulations. Keep the site and Works clean and tidy.
  - Handling: Collect and store in suitable containers. Remove frequently and dispose off site in a safe and competent manner:
    - Non-hazardous material: In a manner approved by the Waste Regulation Authority.
    - Hazardous material: As directed by the Waste Regulation Authority and in accordance with relevant regulations.
  - Recyclable material: Sort and dispose at a Materials Recycling Facility approved by the Waste Regulation Authority.
  - Voids and cavities in the construction: Remove rubbish, dirt and residues before closing in.
  - Waste transfer documentation: Retain on site.

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**PROTECT THE FOLLOWING**

- 510 EXISTING SERVICES
- Confirmation: Notify all service authorities, statutory undertakers and/ or adjacent owners of proposed works not less than one week before commencing site operations.
  - Identification: Before starting work, check and mark positions of utilities/ services. Where positions are not shown on drawings obtain relevant details from service authorities, statutory undertakers or other owners.
  - Work adjacent to services:
    - Comply with service authority's/ statutory undertaker's recommendations.
    - Adequately protect, and prevent damage to services: Do not interfere with their operation without consent of service authorities/ statutory undertakers or other owners.
  - Identifying services:
    - Below ground: Use signboards, giving type and depth;
    - Overhead: Use headroom markers.
  - Damage to services: If any results from execution of the Works:
    - Immediately give notice and notify appropriate service authority/ statutory undertaker.
    - Make arrangements for the work to be made good without delay to the satisfaction of service authority/ statutory undertaker or other owner as appropriate.
    - Any measures taken to deal with an emergency will not affect the extent of the Contractor's liability.
  - Marker tapes or protective covers: Replace, if disturbed during site operations, to service authority's/ statutory undertakers recommendations.
- 520 ROADS AND FOOTPATHS
- Duty: Maintain roads and footpaths within and adjacent to the site and keep clear of mud and debris.
  - Damage caused by site traffic or otherwise consequent upon the Works: Make good to the satisfaction of the Employer, Local Authority or other owner.
- 530 EXISTING TOPSOIL/ SUBSOIL
- Duty: Prevent over compaction of existing topsoil and subsoil in those areas which may be damaged by construction traffic, parking of vehicles, temporary site accommodation or storage of materials and which will require reinstatement prior to completion of the Works.
  - Protection: Before starting work submit proposals for protective measures.

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- 555 WILDLIFE SPECIES AND HABITATS
- General: Safeguard the following: Bats if discovered.
  - 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: TBA.
- 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. Reinstall in original positions.
  - Extent: Before work in each room starts the Employer will remove the following:
    - TBA.
- 620 ADJOINING PROPERTY
- Permission: Obtain as necessary from owners if requiring to erect scaffolding on or otherwise use adjoining property.
- 625 ADJOINING PROPERTY RESTRICTIONS
- Precautions:
    - Prevent trespass of workpeople and take precautions to prevent damage to adjoining property.
    - Pay all charges.
    - Remove and make good on completion or when directed.
  - Damage: Bear cost of repairing damage arising from execution of the Works.

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630 EXISTING STRUCTURES

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

640 MATERIALS FOR RECYCLING/ REUSE

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

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

170 WORKING HOURS

- Specific limitations: Monday to Friday 8am to 5pm - Working outside of these hours only with prior agreement with Contract Administrator.

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## A36 FACILITIES/ TEMPORARY WORK/ SERVICES

### GENERALLY

#### TEMPORARY WORKS

- 340 NAME BOARDS/ ADVERTISEMENTS
- Name boards/ advertisements: Not permitted.

#### SERVICES AND FACILITIES

- 410 LIGHTING
- Finishing work and inspection: Provide temporary lighting, the intensity and direction of which closely resembles that delivered by the permanent installation.
- 420 LIGHTING AND POWER
- Supply: Electricity from the Employer's mains may be used for the Works as follows:
    - Metering: Free of charge.
    - Point of supply: TBA.
    - Available capacity: .
    - Frequency: 50 Hz.
    - 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: TBA.
    - Location of supply point: TBA.
    - Conditions/ Restrictions: .
  - 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.

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- 520 USE OF PERMANENT HEATING SYSTEM
- Permanent heating installation: May be used for drying out the Works/ services and controlling temperature and humidity levels.
  - Installation: If used:
    - Take responsibility for operation, maintenance and remedial work.
    - Arrange supervision by and indemnification of the appropriate Subcontractors.
    - Pay costs arising.
- 530 BENEFICIAL USE OF INSTALLED SYSTEMS
- Permanent systems: Do not use for the Works.

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## 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: None.
  - Format: Paper and Electronic.
  - Number of copies: 1.
  - Delivery to: Contract Administrator. by (date) 2 weeks following PC.
- 115 THE HEALTH AND SAFETY FILE
- Responsibility: the contractor.
  - Content: Obtain and provide the following information: T BA.
  - Format: Paper and Electronic
  - Delivery to: Contract Administrator By (date): 2 weeks following PC.
- 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.

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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.

£	p

**A40 CONTRACTOR'S GENERAL COST ITEMS:  
MANAGEMENT AND STAFF**

- 110 MANAGEMENT AND STAFF
  - Cost significant items: Site Manager required throughout the works.

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**A41 CONTRACTOR'S GENERAL COST ITEMS: SITE ACCOMMODATION**

110 SITE ACCOMMODATION

- Details: Site accommodation required or made/ not made available by the Employer: See section A36.
- Cost significant items:  
 The Employer has made available a Kitchen / Self Mess area next to the compound area adjacent to Roof 7. This room contains seating, sink with hot and cold water, cooking and washing facilities. If the contractor uses this area, it should be cleaned thoroughly on completion of works.

There is no WC allocated to the contractor during term time. The contractor is to allow to provide a portable WC for the period of time that works are on site during term time (provisionally 4 weeks).

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**A42 CONTRACTOR'S GENERAL COST ITEMS: SERVICES AND FACILITIES**

- 110 SERVICES AND FACILITIES
- Details: Services or facilities required or made/ not made available by the Employer: See section A36.
  - Cost significant items: Employer has made a kitchen area available for use by the contractor that is located on site. This area has a sink with hot and cold water that may be used. Must be kept clean at all times by contractor. The WC on site may be used as long as kept clean throughout.

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## A54 PROVISIONAL WORK/ ITEMS

- 110 PROVISIONAL SUMS FOR DEFINED WORK
- Item: Refer to Work Schedule.
  - Description of work: Refer to Work Schedule.
  - Provisional Sums: Include Refer to Work Schedule.
  - Allow for general attendance.
- 210 PROVISIONAL SUMS FOR UNDEFINED WORK
- Item: Refer to Work Schedule.
  - Description of work: Refer to Work Schedule.
  - Provisional Sums: Include Refer to Work Schedule.
  - Allow for general attendance.
- 590 CONTINGENCIES
- Provisional sum: Include: Refer to Work Schedule.

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**A55 DAYWORKS**

150A DAYWORK CHARGES

" General: Where an instruction is issued requiring a variation which is not of a similar character or executed under similar conditions to work included in the Contract and where work cannot properly be measured and valued, the Contractor shall be allowed payment on a daywork basis at the following rates:

RICS/ Construction Confederation: Prime cost of labour:  
The sum of £ 300.

- Percentage adjustment to cover incidental costs, overheads and profit: \_\_\_\_\_%.
- Prime cost of materials and goods: The sum of £ 100.
- Percentage adjustment to cover incidental costs, overheads and profit: \_\_\_\_\_%.
- Prime cost of plant: The sum of £ 100.
- Percentage adjustment to cover incidental costs, overheads and profit: \_\_\_\_\_%

£	p

## Brabins Almshouses - Remedial Repairs - Prelims

<b>Financial Summary</b>	<b>£</b>
A10 PROJECT PARTICULARS	
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A12 THE SITE/ EXISTING BUILDINGS	
A13 DESCRIPTION OF THE WORK	
A20 JCT MINOR WORK BUILDING CONTRACT (MW)	
A30 TENDERING/ SUBLETTING/ SUPPLY	
A31 PROVISION, CONTENT AND USE OF DOCUMENTS	
A32 MANAGEMENT OF THE WORKS	
A33 QUALITY STANDARDS/ CONTROL	
A34 SECURITY/ SAFETY/ PROTECTION	
A35 SPECIFIC LIMITATIONS ON METHOD/ SEQUENCE/ TIMING	
A36 FACILITIES/ TEMPORARY WORK/ SERVICES	
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A40 CONTRACTOR'S GENERAL COST ITEMS: MANAGEMENT AND STAFF	
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A42 CONTRACTOR'S GENERAL COST ITEMS: SERVICES AND FACILITIES	
A54 PROVISIONAL WORK/ ITEMS	
A55 DAYWORKS	
<b>Total £</b>	

Signed \_\_\_\_\_

For and on behalf of \_\_\_\_\_

Date \_\_\_\_\_

## 2.00 Materials and Workmanship

# **Brabins Almshouses - Remedial Repairs - M&W**

**10 September 2018**

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**G**

**Structural/Carcassing metal/timber**

**G20**

**Carpentry/ timber framing/ first fixing**

## **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.

### **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.
  - Grade: Temperate hardwoods:.
- Surface finish: Sawn.
- Treatment: None required.

### **30 SELECTION AND USE OF TIMBER**

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

### **40 MOISTURE CONTENT**

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

### **50 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: Timber to be of adequate size and have the same treatment as adjacent timber supports.



# H Cladding/Covering

**H62**  
**Natural slating**

## H62 Natural slating

### 20 REMOVING EXISTING SLATING

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

### 25 UNDERLAY

- Laying: Maintain consistent tautness.
- Vertical laps (minimum): 100 mm wide, coinciding with supports.
- Fixing: Galvanized steel, copper or aluminium 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.

### 35 SLATE FIXING

- General: Fix slating and accessories to make the whole sound and weathertight at earliest opportunity.
- Setting out: To true lines and regular appearance. Lay slates with slightly open (maximum 5 mm) butt joints. Align tails.
- Slate thickness: Consistent in any one course. Lay with thicker end as tail.
- Ends of courses: Use extra wide slates to maintain bond and to ensure that cut slates are as large as possible. Do not use slates less than 150 mm wide.
- Top course: Head-nail short course to maintain gauge.
- Fixing: Centre nail each slate twice through countersunk holes 20-25 mm from side edges.
  - Nails: Copper clout to BS 1202-2 or aluminium clout to BS 1202-3.
  - Nail dimensions: Determine in accordance with BS 5534 to suit site exposure, withdrawal resistance and slate supplier's recommendations.

**M**

**Surface finishes**

**M20**

**Plastered/ Rendered/ Roughcast coatings**

## **M20 Plastered/ Rendered/ Roughcast coatings**

- 10 CEMENT:LIME:SAND SLOBBBERED RENDER - LIME & SAND ONLY
- Substrate: Masonry.
    - Preparation: See specification.
  - Mortar: See specification.
  - Sand: To BS EN 13139.
    - Grading: 0/2 or 0/4 (CP or MP); category 2 fines.
  - Lime: Nonhydraulic to BS EN 459-1, type CL 90S.
  - Undercoats:
    - Mix (cement:lime:sand): See specification.
    - Thickness (excluding dubbing out and keys): First coat 8–12 mm and second coat 6–10 mm.
  - Final coat:
    - Mix (cement:lime:sand): See specification.
    - Thickness: 5-8 mm.
  - Finish: To match existing.
- 67 COLD WEATHER
- Internal work: Take precautions to prevent damage to internal coatings when air temperature is below 3°C.
  - External work: Avoid when air temperature is at or below 5°C and falling or below 3°C 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.
- 78 REMOVING DEFECTIVE EXISTING RENDER
- Render for removal: Detached, hollow, soft, friable, badly cracked, affected by efflorescence or otherwise damaged.
  - Removing defective render: Cut out to regular rectangular areas with straight, square cut or slightly undercut edges.
    - Render with imitation joints: Cut back to joint lines.
  - Cracks (other than hairline cracks): Cut out to a width of 75 mm (minimum).

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.

93 CURING AND DRYING OF RENDER COATINGS

- Curing: Keep each coat damp by covering with polyethylene sheet and/ or spraying with water
  - Curing period (minimum): As recommended by manufacturer.
- Drying: Allow each coat to dry thoroughly, with shrinkage substantially complete before applying next coat.

**Z**

**Building fabric reference specification**



**Z21**  
**Mortars**

## Z21 Mortars

- 10 MORTAR MIXES
- Specification: Proportions and additional requirements for mortar materials are specified elsewhere.
- 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 READY-MIXED LIME:SAND FOR CEMENT GAUGED MASONRY MORTARS
- Standard: To BS EN 998-2.
  - Lime: Nonhydraulic to BS EN 459-1.
    - Type: CL 90S.
  - Pigments for coloured mortars: To BS EN 12878.
- 50 ADMIXTURES FOR SITE MADE MORTARS
- Air entraining (plasticizing) admixtures: To BS EN 934-3 and compatible with other mortar constituents.
  - Other admixtures: Submit proposals.
  - Prohibited admixtures: Calcium chloride, ethylene glycol and any admixture containing calcium chloride.
- 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.

### 3.00 Schedule of Building Works

	£
<p>Preamble: All works to be undertaken in strict accordance with all information contained within the tender documentation.</p>	
<p><b><u>PART 1.00 - GENERAL AND PREPARATORY WORKS</u></b></p>	
<p>1.01.00 The Contractor is to allow for all works either detailed or inferred in the Schedule and must carry out a detailed inspection of the site to ascertain the extent and nature of the works. Any discrepancies or queries must be brought to the attention of the Contract Administrator for clarification before the commencement of works.</p>	ITEM
<p>1.02.00 Adequate protection shall be provided to all hard landscaping (E.g. pavings, kerbs, etc.) in the vicinity of the works, and on the site generally.</p>	ITEM
<p>1.03.00 The Contractor is to ensure all temporary scaffolding/working platforms and edge protection is provided to conform to all relevant Health &amp; Safety legislation in order to undertake the works.</p>	ITEM
<p>1.04.00 The contractor is to allow to provide <u>all</u> necessary scaffold and other suitable access equipment as required to carry out the whole of the works.</p>	ITEM
<p>1.05.00 All access equipment is to comply with relevant Health and Safety Legislation where applicable. Contractor should allow for all Local Authority permits as may be required, excluding Listed Building Consent which has already been obtained.</p>	ITEM
<p>1.06.00 The Construction (Design and Management) Regulations 2015 apply to these works and a Principal Designer has been appointed. The contractor should make allowance to perform the duties of principal contractor including preparation of a construction phase plan and provision of relevant information for inclusion in the health and safety file.</p>	ITEM
<p>1.07.00 Allow to comply with any and all specific requirements confirmed in the Pre-Construction Information Document.</p>	ITEM
<p>1.08.00 Security of the premises is to be of paramount importance. The contractor is to note that out of hours security to the building must not be unnecessarily compromised.</p>	ITEM
<p>1.09.00 The works have been specified as being undertaken within the following specific times only. The CA is to be given at least 24 hours' notice of all un-programmed out of hours working. This will need to be checked with the client in advance.</p> <p>Working hours: 09.00 – 17.00</p>	ITEM
<p>1.10.00 The contractor should include to fence off work areas at such times to protect public.</p>	ITEM
<p>1.11.00 The contractor should allow to clean and clear all work areas and areas affected by the works before handover.</p>	ITEM
<p>1.12.00 The contractor should allow to liaise with the roofing manufacturer to identify their requirements for stage inspections during the roof recovering works. The contractor should ensure the correct persons are then advised in advance of any pre-agreed stages being reached. All to ensure warranty can be issued on completion of works.</p>	ITEM

1.13.00 The contractor should include to ensure that all rainwater outlets are suitably protected during the works to prevent dirt and debris falling down them as a result of roof works causing blockages.

**ITEM**

1.14.00 The contractor should include to ensure a dedicated site manager is in place on site at all times throughout the course of completing the works.

**ITEM**

1.15.00 All parts of this schedule are to be read in conjunction with:-

- Section 2 Materials and Workmanship clauses
- Appendix A – Drawings and Documents
- Appendix B – Pre-Construction Information
- Appendix C – Bat Survey Final Report
- Appendix D – Mortar Analysis Results and Specified Mix

**TOTAL PART 1.00 TO SECTION 3.00 SUMMARY**

## **PART 2.00 - THE WORKS**

Preamble: All works to be undertaken in strict accordance with all information contained within the tender documentation. All works to be undertaken strictly in line with manufacturer's printed instructions valid at time of installation.

### **ACCESS AND ACCESS EQUIPMENT**

- |         |  |             |
|---------|--|-------------|
| 2.01.00 | The Contractor is to provide suitable temporary access equipment including but not limited to; fixed scaffold, towers, platforms and man anchor systems to undertake the works to prevent the risk of falling. All access equipment is to comply with relevant to H&S legislation where applicable. All operators and installers are to be appropriately trained to recognised industry standards. | <b>ITEM</b> |
| 2.02.00 | The Contractor is to include for inspection of scaffolding prior to commencement of the works and inspection by a competent person every 7 days thereafter.  | <b>ITEM</b> |
| 2.03.00 | All scaffolding and access proposals to be submitted to the CA for approval at least 10 days prior to commencement of works.   | <b>ITEM</b> |
| 2.04.00 | The Contractor is to ensure that all means of access and egress at ground level is maintained throughout the course of the works as necessary. The Contractor is also to allow to protect the hardstandings below access equipment to ensure no damage occurs.   | <b>ITEM</b> |

### **ROOF WORKS**

Refer to JYM Drawing 1608.04 for Roof Works locations.  
Tenant in occupation during roofworks.

#### **GENERALLY**

- |         |   |             |
|---------|---|-------------|
| 2.05.00 | All works must be undertaken as per Listed Building Consent condition 02, stating that all works must be undertaken as per JYM Drawings 1608.04.  |             |
| 2.06.00 | Allow for all stripping back, preparation and disposal (if required) of any roof coverings as appropriate to conform with specification. Where coverings are to be taken back to roof deck include to remove; stone slates to front elevation and metamorphic slates to rear. All to facilitate works as per roofwork specification within documents contained at Appendix A. | <b>ITEM</b> |
| 2.07.00 | Allow to protect all other items of fixed plant and equipment to be retained on or about the roof surfaces including but not limited to; roof extract vents.  | <b>ITEM</b> |
| 2.08.00 | Allow to remove or set aside and reinstate any lightning protection measures installed on the roof surfaces.  | <b>ITEM</b> |

### 29 WINDY STREET ROOF WORKS

2.09.00 Remove and replace lead flashings to stone faced chimney stacks as per location on JYM Drawing 04 - Roof Works. The contractor is to provide a suitable access scaffold to access the chimney stack. All access equipment is to comply with relevant H&S legislation and all operators and installers are to be appropriately trained to recognised industry standards.

ITEM

2.10.00 Remove stone slates from front roof pitch and store in preparation for relaying as per location on JYM Drawing 04 - Roof Works. As many stone slates as possible should be retained and reused, subject to their condition. Any significantly damaged stone slates should be discarded and replaced from a local quarry if possible or salvaged. It is strongly presumed that the stone flags are of pendle grit, a local gritstone. If these are not available, a similar stone should be used such as Yorkshire stone slates. Provisionally replace 5 no. rotten battens to full length of pitch. The stone slates and metamorphic slates should then be relayed in diminishing courses as existing over a breathable sarking membrane and new treated battens.

ITEM

2.11.00 Remove only the necessary ridge tiles from the roof structure above 29 Windy St and store in preparation for relaying. Remove the section of the ridge beam that has been damaged by wet rot as per location on JYM Drawing 04 - Roof Works. The damaged section of the ridge beam can be discarded and should be replaced with a suitable timber as close to the original if possible. The few removed ridge tiles can then be relayed.

ITEM

### 33 WINDY STREET ROOF WORKS

2.12.00 Remove and replace lead flashings to both stone faced chimney stacks as per locations on JYM Drawing 04 - Roof Works. The contractor is to provide a suitable access scaffold or MEWP to access the chimney stack. All access equipment is to comply with relevant H&S legislation and all operators and installers are to be appropriately trained to recognised industry standards.

ITEM

### INTERNAL WORKS

Refer to JYM Drawing 1608.01 for Internal Works locations.

#### GENERALLY

2.13.00 All works must be undertaken as per Listed Building Consent condition 02, stating that all works must be undertaken as per JYM Drawings 1608.01.

2.14.00 Allow for removal and disposal (if required) of all waste plaster as appropriate to conform with specification. Where plaster is to be taken back to lath or masonry include to remove cement based plaster only.

2.15.00 Allow to isolate, remove or set aside and reinstate any services installed onto the plasterwork.

2.16.00 Tenant to vacate the premises during the internal works.

#### INTERNAL PLASTERING IN 29 WINDY ST

2.16.00 All works must be undertaken in the locations specified only as per JYM Drawing 1608.01.

2.17.00	Remove all skirting, architraves, fixings, radiators and other joinery or services to ensure a clear working area.	ITEM
2.18.00	Remove all traces of existing cement based plaster to the wall substrate. The substrate is presumably just the masonry, although could potentially be a timber lath.	ITEM
2.19.00	Rake out masonry joints and ensure all traces of the existing cement based plaster are removed along with any fixings. Treat lath if present against insect and fungal attack with only a water based carrier solution. This must be fully dried out before any work commences, as any areas still wet will cause failure.	ITEM
2.20.00	Leave area to dry out for approximately 24-48 hours, open to negotiation depending on dampness levels.	ITEM
2.21.00	Prepare the lime putty based plaster mix and add animal hair for strengthening purposes to all coats but the finishing.	ITEM
2.22.00	Timber lath backgrounds if present should be well wetted the day before and again 2 hours before work proceeds. At no time should the lath be so dry that it will absorb moisture rapidly from the first coat when it is applied. If the wall becomes dry in patches, these areas should be damped again to ensure uniform adhesion.	ITEM
2.23.00	Apply under coat and key joints or apply a dubbing out coat if necessary. The under coat is to consist of one part fat lime to two and a half parts grit sand (this mix should have stood for at least two weeks and the putty used must be at least 3 months old). Just before the mortar is ready for application animal hair should be added to the mix approx. 0.5 kg per 100 litres.	ITEM
2.24.00	Apply float coat. Its strength should be less than the previous coat. This second undercoat should consist of one part fat lime to 2 ½ parts well graded sand (this mix should have stood for at least two weeks and the putty used must be at least 3 months old). Just before the mortar is ready for application animal hair should be added to the mix approx. 0.5kg per 100 litres.	ITEM
2.25.00	Apply the finishing coat and level off. Use a well matured, un-haired mix of one part sieved lime putty to one part fine silica sand. This top coat can be applied in two thin coats immediately after each other.	ITEM

#### **EXTERNAL WORKS**

Refer to JYM Drawings 1608.01, 1608.02, 1608.03 and 1608.05 for locations of external works.

#### **GENERALLY**

2.26.00	All works must be undertaken as per Listed Building Consent condition 02, stating that all works must be undertaken as per JYM Drawings 1608.01, 1608.02, 1608.03 and 1608.05. Allow for removal and disposal (if required) of all waste mortar as appropriate to conform with specification.
---------	---

- 2.27.00 Provisional approx. lime mortar quantity for repointing should be based on the north facing gable end area of approx. 22m<sup>2</sup>.  
Provisional approx. lime render quantity for slobbering should be based on the rear elevation area of approx. 34m<sup>2</sup>.

Womersley's Ltd should be contacted to provide the specified lime mixes, details below.

Womersley's Ltd, Ravensthorpe Indust Est, Low Mill Lane, Ravensthorpe, West Yorkshire, WF13 3LN, United Kingdom

Tel: 01924 400651 Email: info@womersleys.co.uk

**EXTERNAL REPOINTING AT 29 WINDY ST**

- 2.28.00 Carefully rake out defective cement mortar joint until all is removed, ensuring that the top/bottom shoulder is well recessed. Areas raked out should only be as per the locations specified in JYM Drawings 1608.01, 1608.02 and 1608.03. Heavy machinery and angle grinders should not be used in order to reduce the risk of damaging the original stonework. **ITEM**
- 2.29.00 Joints should be thoroughly cleaned with clean water using brushes or a low pressure hose. All loose materials, dust and debris must also be removed to avoid issues with the joints. **ITEM**
- 2.30.00 Prepare the specified lime based mortar mix for repointing the areas specified in JYM Drawings 1608.01, 1608.02 and 1608.03. The proposed suitable mix is of 1 part Ionic Old White NHL 3.5: 1.5 parts Leighton Buzzard Sand: 1.5 parts Nosterfield Sand. **ITEM**
- 2.31.00 Point the masonry with the specified mix of 1 part Ionic Old White NHL 3.5: 1.5 parts Leighton Buzzard Sand: 1.5 parts Nosterfield Sand. A 1m<sup>2</sup> sample may be required for inspection and approval by the conservation officer during the works. **ITEM**
- 2.32.00 clean water to bring out the brown and black aggregate that will give it the suitable colouring. Spray with fine mist spray to prevent rapid drying throughout the process. **ITEM**
- 2.33.00 Allow for creating small gaps similar to existing along wall tops upon completion to ensure the continuation of a bat roosting habitat, as specified in the bat survey RAMS. **ITEM**

**SLOBBERED MASONRY TO REAR ELEVATION OF 29 WINDY ST**

- 2.34.00 Carefully rake off defective cement/lime based mortar from masonry face and joints until most cement based material is removed, ensuring that the top/bottom shoulders of the joints are recessed. Areas raked out should only be as per the locations specified in JYM Drawings 1608.01 and 1608.05. Heavy machinery and angle grinders should not be used in order to reduce the risk of damaging the original stonework.  
The approximate area of slobbered render to be raked off and reslobbered is 34m<sup>2</sup>. **ITEM**
- 2.35.00 Joints should be thoroughly cleaned with clean water using brushes or a low pressure hose. All loose materials, dust and debris must be removed to avoid issues with the joints. **ITEM**



2.36.00	<p>Prepare the specified lime based mortar mix for any deep pointing or daubing out.          Mix to be composed of - 1 part Ionic NHL 3.5 Old White Lime : 2 and a half parts Nosterfield Sand for use in the areas specified in JYM Drawings 1608.01, 1608.02, 1608.03 and 1608.05.</p>	<b>ITEM</b>
2.37.00	<p>Point the masonry with the specified mix and allow for any deep pointing or daubing out. This should be seen as the base coat for the slobbered render.</p>	<b>ITEM</b>
2.38.00	<p>Prepare the specified lime based mortar mix for the slobber coat.          Mix to be composed of - 1 part Ionic NHL 3.5 Old White Lime : 2 parts Nosterfield Sand and 1 part Leighton Buzzard sand for use in the areas specified in JYM Drawings 1608.01, 1608.02, 1608.03 and 1608.05.</p>	
2.39.00	<p>Slobber the face of the masonry. This should be similar to a thin layer of render, making sure that the sandstone rubble masonry is not completely covered with the faces of the rubble stones still visible. The existing is an example of this and other pictures of local examples can be provided. This should be seen as the top coat.</p>	<b>ITEM</b>
<b>COMPLETION</b>		
2.40.00	<p>Allow for rodding/jetting all rainwater downpipes and gulleys to the main sewer.</p>	<b>ITEM</b>
2.41.00	<p>Allow to retain and redecorate all walls and ceiling finishes, paint on finishes, doors and conditionally within working area. Colours : TBC with client.</p>	<b>ITEM</b>

**PROVISIONAL SUMS & CONTINGENCY**

2.42.00 The Contractor is to allow a provisional sum of £2,500.00 for repairs to defective structural roof timbers uncovered during the course of the works.

**Provisional Sum**

**£2,500.00**

2.43.00 The Contractor is to allow a Provisional Sum of £500.00 for making good internally following replastering works.

**Provisional Sum**

**£500.00**

2.44.00 The Contractor is to allow a contingency sum of £5,000.00

**Contingency**

**£5,000.00**

**TOTAL PART 2.00 TO SECTION 3.00 SUMMARY**

**SECTION 3.00 SUMMARY**

**PART 1.00 - GENERAL AND PREPARATORY WORKS**

**PART 2.00 - THE WORKS**

**TOTAL SECTION 3.00 TO SECTION 4.00 GENERAL SUMMARY**

## 4.00 General Summary

## 4.00 General Summary

### SECTION NUMBER 4.00 - GENERAL SUMMARY

SECTION 1.00 - PRELIMINARIES

SECTION 2.00 - MATERIALS AND WORKMANSHIP

SECTION 3.00 - SCHEDULE OF BUILDING WORKS

£

**TOTAL TO FORM OF TENDER**

Prepared by: .....

Signed: .....

On Behalf of : .....

Dated: .....

## 5.00 Form of Tender

**FORM OF TENDER**

**FOR**

**REMEDIAL REPAIR WORKS**

**AT**

**JOHN BRABINS ALMSHOUSES, 29 & 33 WINDY STREET, CHIPPING, PR3 2GD**

Sirs

We undertake to complete the works within ..... weeks from the date of possession of the site. (With a maximum of 4 calendar weeks. Serious consideration will be given to tenders detailing a shorter programme for completion of the works.)

We hereby undertake to execute and complete the whole of the works required to be done and in strict accordance with the Schedule of Works and all enclosures accompanying and referred to on letter dated July 2018 to the entire satisfaction of the Contract Administrator for the sum of:

\_\_\_\_\_ Pounds

\_\_\_\_\_ Pence

**£ .....**

Which includes for all Provisional sums shown in the Schedules of work and additional thereto for profit and attendance as appropriate.

The rate given below is the percentage to be added to defined and undefined provisional sums for profit where not otherwise indicated:-

Profit .....%

This is a fixed price tender and not subject to any Fluctuations.

In the event of our tender being accepted, we undertake to enter into a contract embodying all the conditions contained in this offer.

It is understood that the Employer does not bind himself to accept the lowest or any tender.

I/We certify that this tender is made in good faith and that we have not fixed or adjusted the amount of the tender by or under or in accordance with any agreement or arrangement with any other person. We also certify that we have not, and we undertake that we will not:-

a) Before the award of any contract for the work:-

i. Communicate to any person other than the Employer or a person duly authorised by him in that behalf the amount or approximate amount of the tender or proposed tender, except where the disclosure, in confidence, of the approximate amount of the tender was necessary to obtain insurance premium quotations required for the preparation of the tender;

ii. Enter into any agreement or arrangement with any person that he shall refrain from tendering or as to the amount of any tender to be submitted.

b) Pay, give or offer or agree to pay or give any sum of money or other valuable consideration directly or indirectly to any person for doing or having done or causing or having caused to be done in relation to any other tender or proposed tender for the work, any act or thing of the sort described at (a) (i) or (ii).

I/We also certify that the principles described in paragraph (a) or (b) above have been, or will be, brought to the attention of all subcontractors, suppliers and associated companies providing services or materials connected with the tender and any contract entered into with such subcontractors, suppliers or associated companies will be made on the basis of compliance with the above principles by all parties.

In this certificate, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions. The word "person" includes any persons and anybody or association, corporate or unincorporated; "any agreement or arrangement" includes any transaction, formal or informal and whether legally binding or not; and "the work" means the work in relation to which this tender is made.

Dated this: .....

Signature: .....

In the capacity of: .....

Duly authorised to sign tender on behalf of: .....

Address:






## **Appendices**

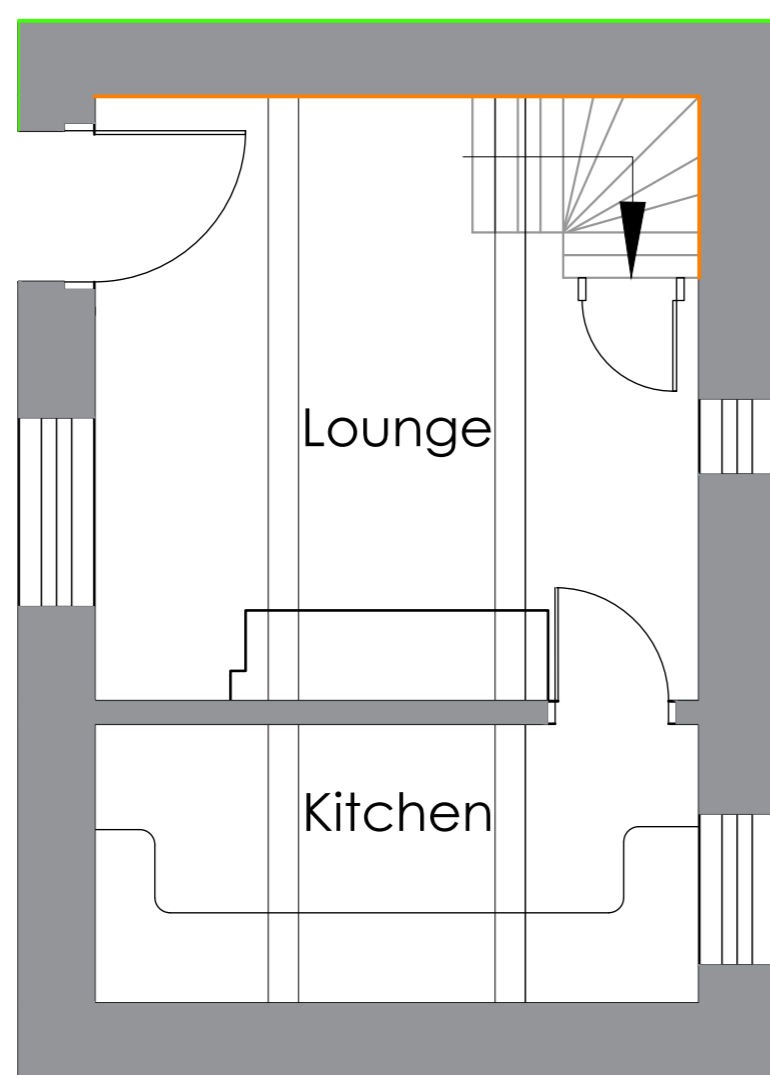
### **Drawings and Documents**

- A) JYM Partnership Drgs:**
  - 1608.01**
  - 1608.02**
  - 1608.03**
  - 1608.04**
  - 1608.05**
  
- B) Pre Construction Information Document**
  
- C) Bat Survey Final Report**
  
- D) Mortar Analysis Results and New Specified Mix**

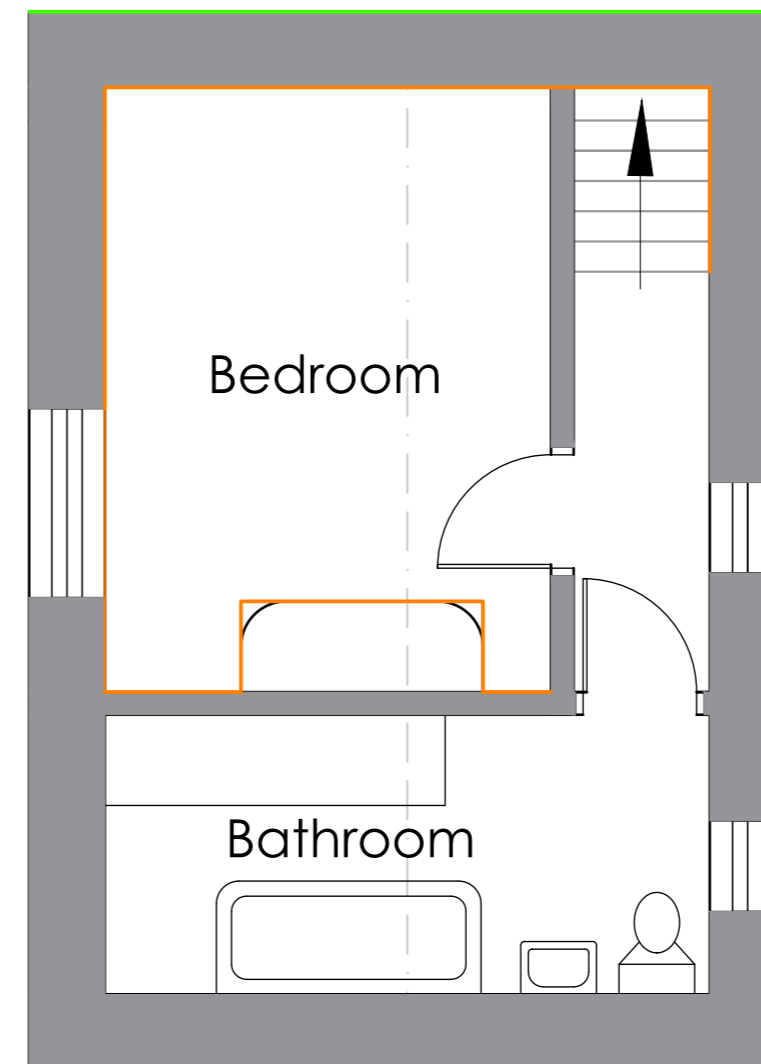
# Appendix A

## JYM Partnership Drawings

-  Internal Replastering
-  External Repointing
-  External Slobbered Rendering



**Ground Floor Plan**  
(Scale at 1:50)



**First Floor Plan**  
(Scale at 1:50)

Notes:

1. This Drawing & Design are copyright and may not be reproduced without the written consent of The J.Y.M. Partnership
2. DO NOT SCALE - Use Figured Dimensions Only.
3. The CONTRACTOR is to check and verify all Figured Dimensions, Site & Drainage Levels prior to commencement of work and notify The J.Y.M. Partnership of any discrepancies.
4. The Contractor is to check the drawing against all other relevant drawings, specifications and/or bills of quantities as issued.
5. IF IN DOUBT - ASK!

Rev	Date	Revision



Oak House 28 sceptre Way  
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Tel : 01772 323666  
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Email : jym@jympartnership.co.uk  
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project:  
Brabins Almshouses, 29 Windy Street, Chipping, Lancashire

client:  
Brabins Charitable Trust

drawing title:  
Floor Plan

scale:  
As shown at A2

drawn: LM	checked: CB
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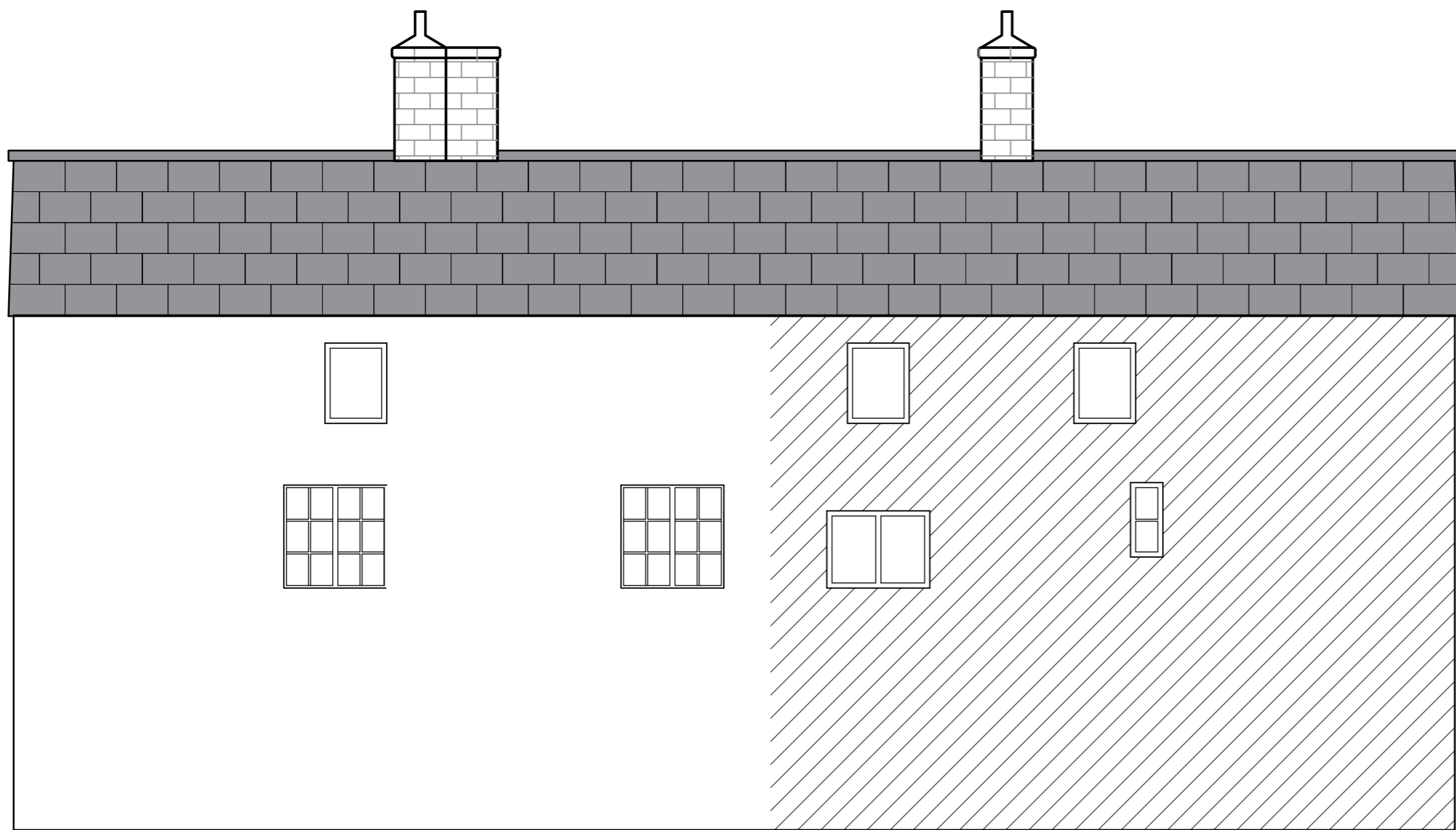
date:  
August 2018

project no. 1608	drg. no. 01	rev. A
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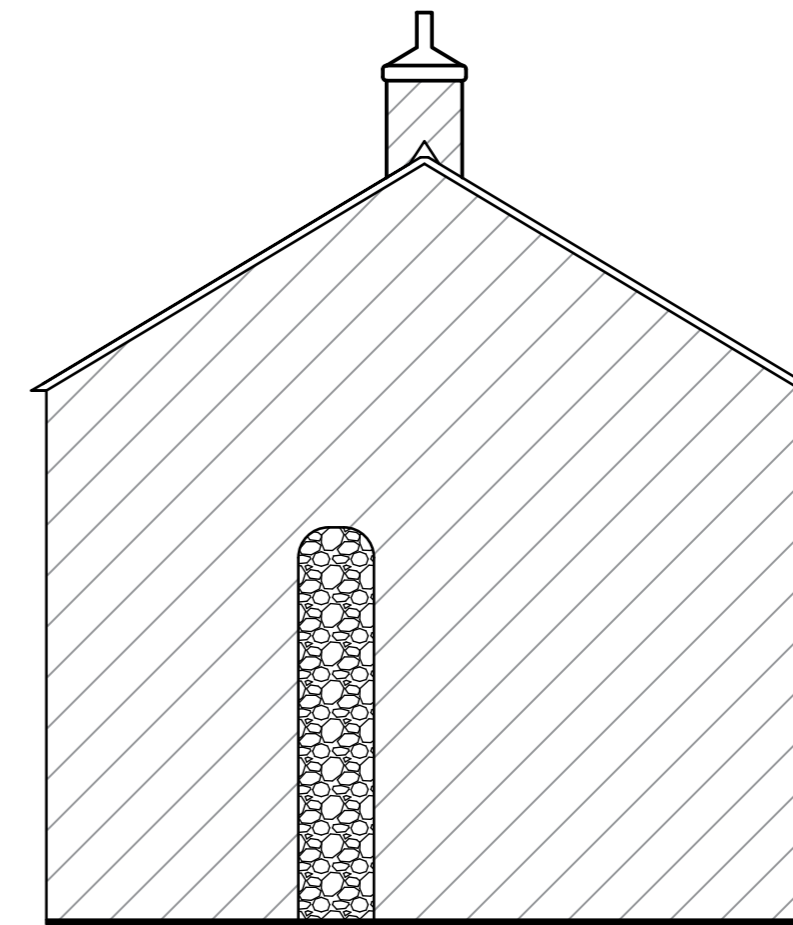
## Front Elevation

(Scale at 1:50)



## Rear Elevation

(Scale at 1:50)



## Side Elevation

(Scale at 1:50)

External  
Works  
Required

### Notes:

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5. IF IN DOUBT - ASK!

Rev	Date	Revision

**JYM**  
partnership

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project:  
Brabins Almshouses, 29Windy  
Street, Chipping, Lancashire

client:  
Brabins Charitable Trust

drawing title:  
Elevations

scale:  
As shown at A2

drawn: LM	checked: CB
--------------	----------------

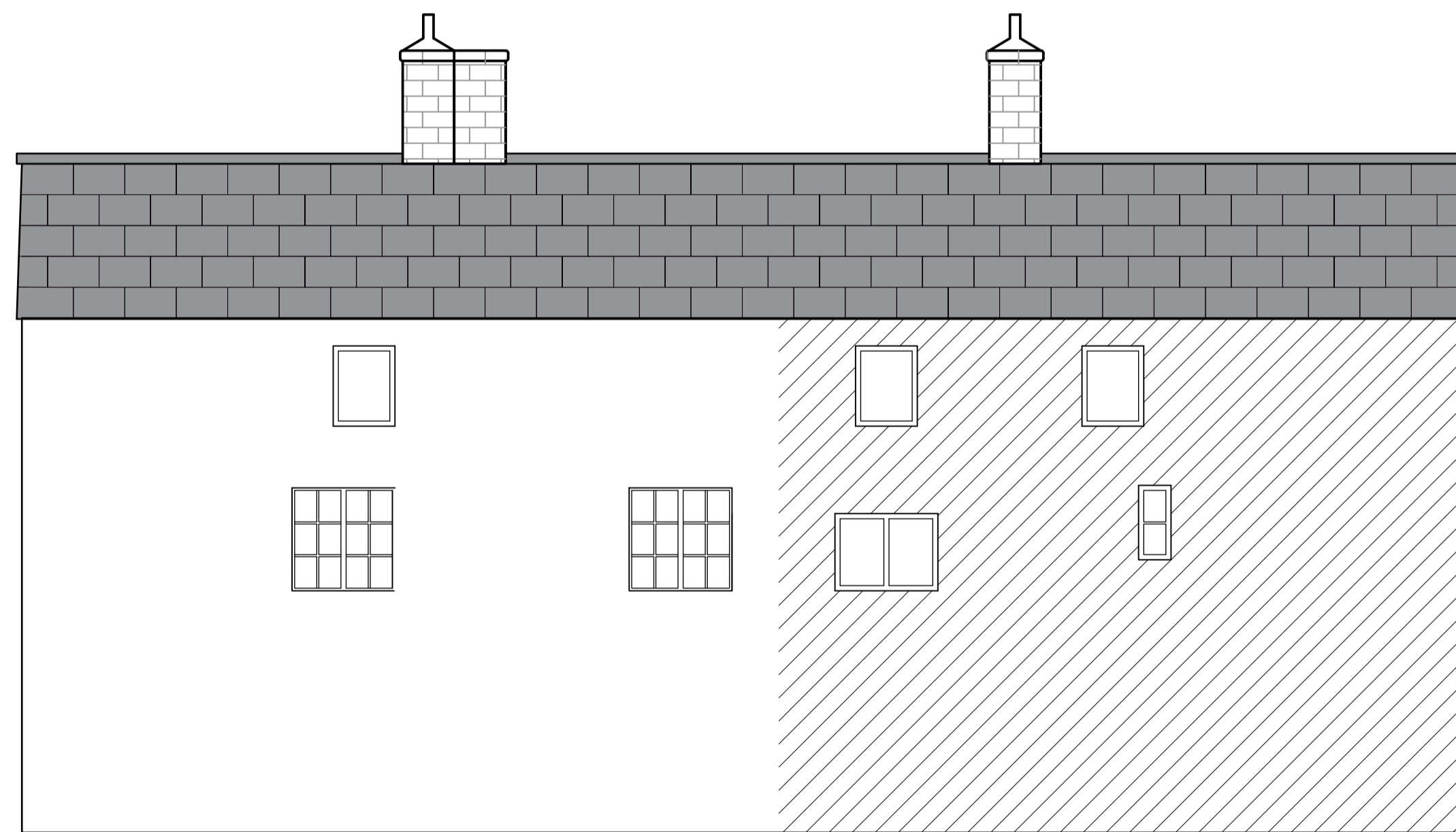
date:  
September 2017

project no. 1608	drg. no. 02	rev. -
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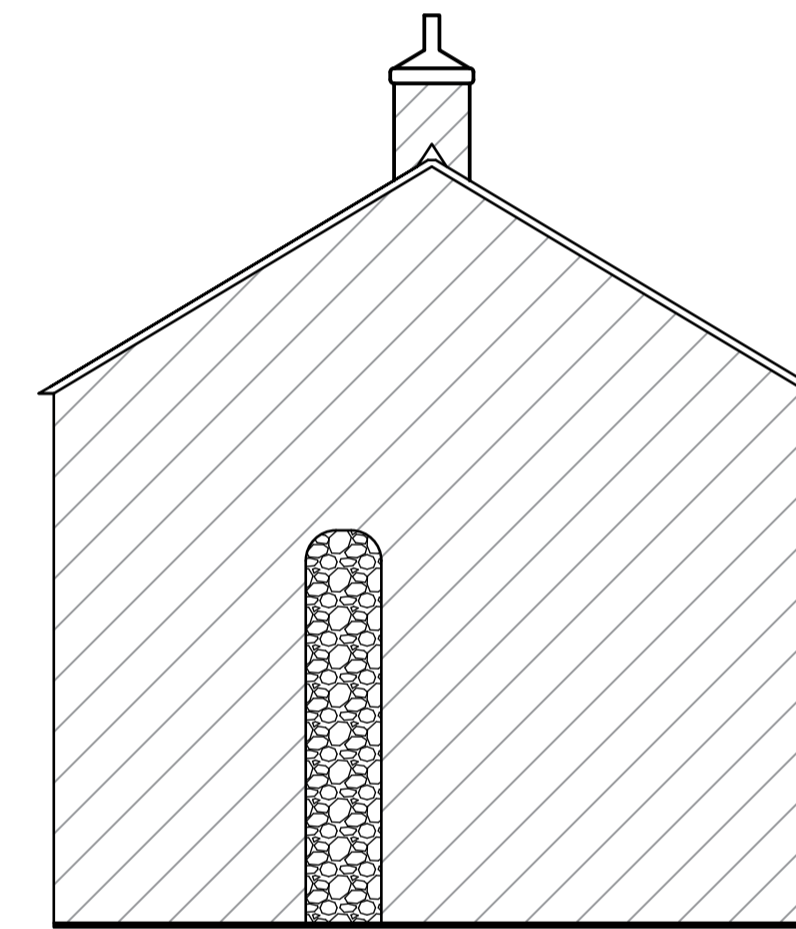
**Front Elevation**

(Scale at 1:50)



**Rear Elevation**

(Scale at 1:50)



**Side Elevation**

(Scale at 1:50)

External Works Required

Notes:

This drawing and design are copyright and may not be reproduced without the written consent of the JYM Partnership.  
 All dimensions are to be checked and verified on site prior to commencement of any works, and/or preparation of any shop drawings. Sizes of and dimensions to any structural elements are indicative only. See structural engineers drawings for actual sizes / dimensions. Sizes of and dimensions to any service elements are indicative only. See service engineers drawings for actual sizes and dimensions.  
 This drawing to be read in conjunction with all relevant Architect's drawings, specifications and/or bills of quantities as issued with other Consultants' information. If in doubt please ask.  
**DO NOT SCALE FROM THIS DRAWING.**

Rev	Date	Revision
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project:  
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 Windy Street, Chipping,  
 Lancashire

client:  
 Brabins Charitable Trust

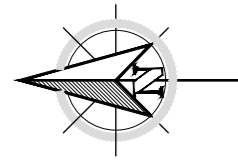
drawing title:  
 Elevations

scale:  
 As Shown at A1

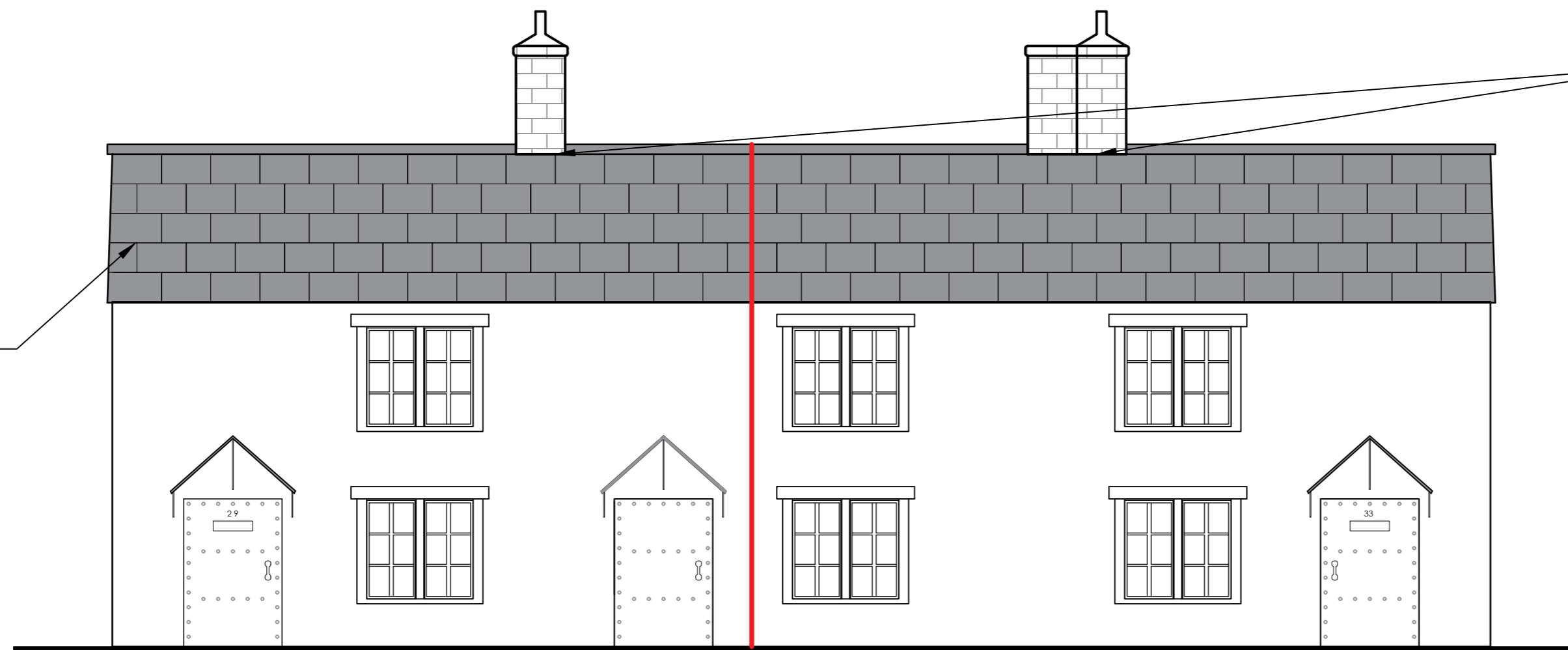
drawn: LM	checked: CB
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date:  
 September 2017

project no. <b>1608</b>	drg. no. <b>03</b>	rev. <b>-</b>
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Location of stone flags to be replaced like for like if damaged. Mirror on rear elevation with slate flags.



Location of flashings to be replaced to three chimney stacks.

**Front Elevation Roof Works**  
(Scale at 1:50)

Location of damaged ridge beam. Approx 0.75M in length.



**Roof Elevation**  
(Scale at 1:50)

**Notes**

**Proposed Roof Works**

Roof works are proposed in the form of replacing the lead flashings to the chimney stacks at 29 & 33 Windy St. At 29 Windy St only it is proposed to replace damaged stone flags on the front roof pitch and replace damaged slates on the rear roof pitch, both of these will be over a breathable sarking membrane.

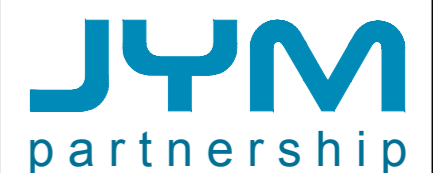
Whenever possible, the stone and welsh slate flags will be preserved and re used. When this is not possible, the stone flags should be replaced like for like from a local quarry. It is strongly presumed that the stone flags used are of Pendle gritstone.

The ridge beam above 29 Windy St has also been damaged by wet rot towards the north facing gable. It is proposed to remove only the damaged part of the ridge beam and replace it with a timber as existing.

**Notes:**

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2. DO NOT SCALE - Use Figured Dimensions Only.
3. The CONTRACTOR is to check and verify all Figured Dimensions, Site & Drainage Levels prior to commencement of work and notify The J.Y.M. Partnership of any discrepancies.
4. The Contractor is to check the drawing against all other relevant drawings, specifications and/or bills of quantities as issued.
5. IF IN DOUBT - ASK!

Rev	Date	Revision



Oak House 28 sceptre Way  
Bamber Bridge Preston PR5 8AY  
Tel : 01772 323666  
Fax : 01772 338611  
Email : jym@jympartnership.co.uk  
www.jympartnership.co.uk

project:  
Brabins Almshouses, 29Windy Street, Chipping, Lancashire

client:  
Brabins Charitable Trust

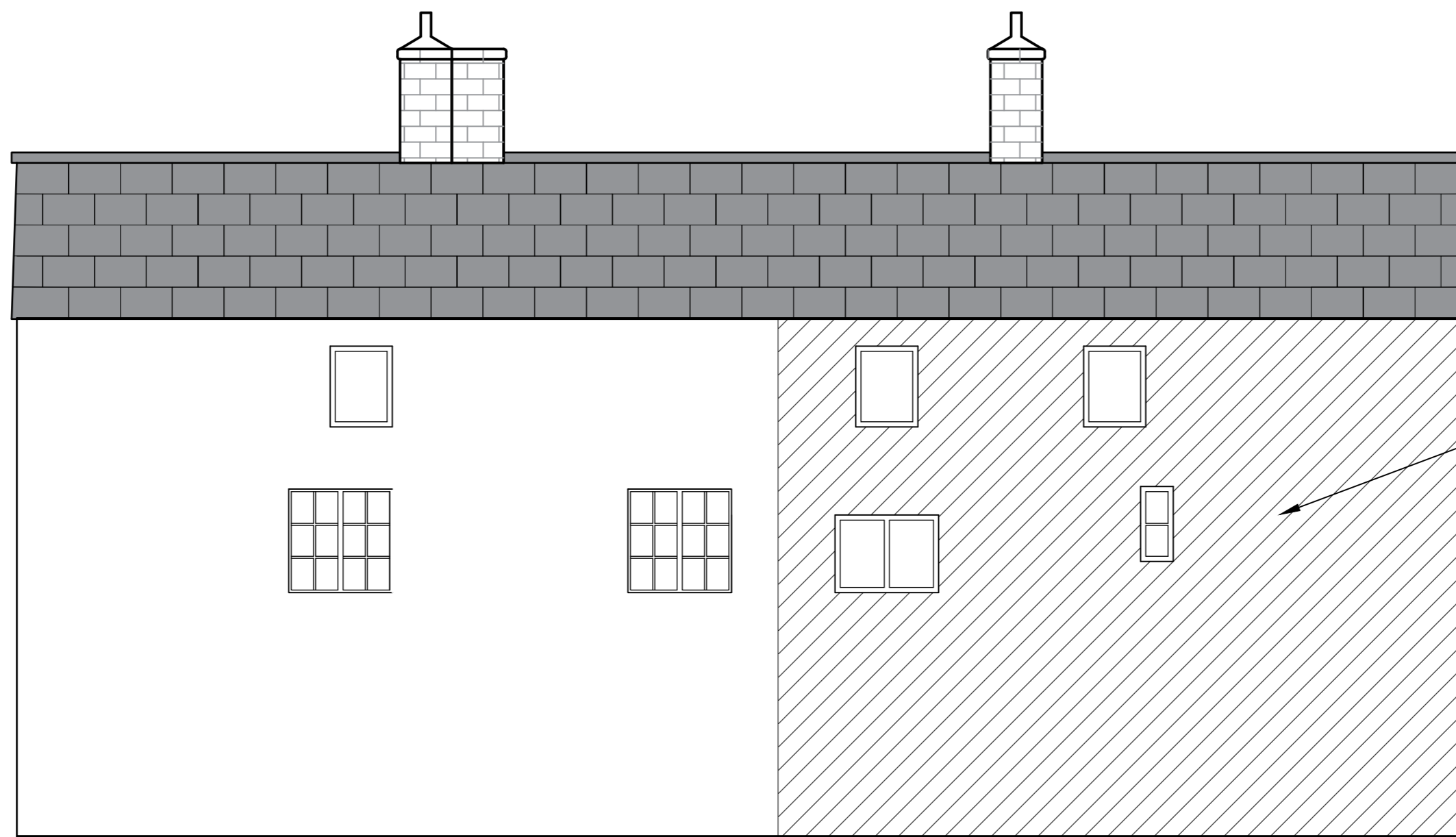
drawing title:  
Roof Works

scale:  
As shown at A2

drawn: LM	checked: CB
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date:  
March 2018

project no.	drg. no.	rev.
1608	04	-



Highlighted area of works to slobbered render

**Rear Elevation - Slobbered Render**  
(Scale at 1:50)

**Notes**

**Works to Slobbered Render at Rear Elevation**

Carefully rake off defective cement/lime based mortar from masonry face and joints until all cement based material is removed, ensuring that the top/bottom shoulders of the joints are well recessed. Areas raked out should only be as per the locations specified in JYM Drawings 1608.01 and 1608.05. Heavy machinery and angle grinders should not be used in order to reduce the risk of damaging the original stonework. Approximate area of slobbered render to be raked out and reslobbered is 34m<sup>2</sup>. Joints should be thoroughly cleaned with clean water using brushes or a low pressure hose. All loose materials, dust and debris must be removed to avoid issues with the joints. Once the area specified on the rear elevation is clear of the cementitious material, the lime should be 'slobbered' over the face of the rear elevation. This should be similar to a thin layer of render, making sure that the sandstone rubble masonry is not completely covered with the faces of the rubble stones still visible. The existing is an example of this and other pictures of local examples can be provided.

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4. The Contractor is to check the drawing against all other relevant drawings, specifications and/or bills of quantities as issued.
5. IF IN DOUBT - ASK!

Rev	Date	Revision
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project:  
Brabins Almshouses, 29 Windy Street, Chipping, Lancashire

client:  
Brabins Charitable Trust

drawing title:  
Rear Elevation - Slobbered Render

scale:  
1:50 at A2

drawn: LM	checked: CB
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date:  
July 2018

project no. 1608	drg. no. 05	rev. -
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**Appendix B**  
**Pre Construction Information Document**





## **PRE-CONSTRUCTION INFORMATION DOCUMENT**

For

### **REMEDIAL REPAIR WORKS**

At

**John Brabins Almshouses**  
29 & 33 Windy Street  
Chipping  
PR3 2GD

By

**JYM Partnership LLP**  
Oak House, 28 Sceptre Way  
Bamber Bridge  
Preston  
PR5 6AW

For

### **Brabins Charitable Trust**

**Date:** September 2018

**Ref:** LM/1608/11/06

**Revision:** -

## 1.0 Project Details and Site Information

### 1.1 Project Description

<b>1.1.1 Remedial Repair Works</b>	External repointing using lime mortar, internal re-plastering using lime plaster, replacement of lead flashings to chimney stacks, replacement of damaged stone flags on front and rear roof pitches, removal of part of ridge beam above 29 Windy Street and replacement with new timber.
------------------------------------	--

### 1.2 Key Participants

<b>Client</b>	Brabins Charitable Trust, 21 Kirklands Chipping Preston PR3 2GD	<b>Contact:</b> <b>Tel:</b> <b>Mob:</b> <b>Email:</b>	Catherine Fleming   Catherine.fleming5@btinternet.com
<b>Contract Administrator</b>	JYM Partnership LLP Oak House, 28 Sceptre Way, Bamber Bridge, Preston, PR5 6AW	<b>Contact:</b> <b>Tel:</b> <b>Mob:</b> <b>Email:</b>	Chris Bell 01772 323 666 07803 076741 <a href="mailto:chris.bell@jympartnership.co.uk">chris.bell@jympartnership.co.uk</a>
<b>Principal Designer</b>	JYM Partnership LLP Oak House, 28 Sceptre Way, Bamber Bridge, Preston, PR5 6AW	<b>Contact:</b> <b>Tel:</b> <b>Mob:</b> <b>Email:</b>	Chris Bell 01772 323 666 07803 076741 <a href="mailto:chris.bell@jympartnership.co.uk">chris.bell@jympartnership.co.uk</a>
<b>Designer</b>		<b>Contact:</b> <b>Tel:</b> <b>Mob:</b> <b>Email:</b>	
<b>Principal Contractor</b>	TBC	<b>Contact:</b> <b>Tel:</b> <b>Mob:</b> <b>Email:</b>	TBC

### 1.3 Site Information

<b>Site Address:</b>	John Brabins Almshouses, 29 & 33 Windy Street, Chipping, PR3 2GD						
<b>Location of Works Within Premises</b>	Interior, roof area and exterior of 29 Windy Street. Roof area only of 33 Windy Street.						
<b>Activities Adjacent to the Site</b>	The site is surrounded predominantly by residential properties of a similar scale and nature. Church yard and Chipping Brook to the rear and Brabin's Endowed School further along Windy St.						
<b>Work Hours</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>	<b>Sunday</b>
	9.00am – 5.00pm	9.00am – 5.00pm	9.00am – 5.00pm	9.00am – 5.00pm	9.00am – 5.00pm	By agreement only	By agreement only
Weekend working only by agreement with Client and contract administrator.							

1.4 Project Programme					
<b>Programme:</b>	<b>Start Date:</b>	October (TBC)	<b>Duration (weeks):</b>	4 weeks	
<b>Phasing Details:</b>	The Principal Contractor will be asked to complete certain items such as the exterior repointing and internal re plastering early in the programme (start first week) in order to give the building as much time as possible to dry out whilst the tenant is out of the building. This and any other phasing details will be discussed and confirmed at the pre-start meeting.				
<b>Contractor's Working Hours:</b>	See 1.3.				
<b>Notification to HSE:</b>	Not likely to be needed due to limited duration and man hours required.	<b>Initial F10 Reference:</b>	N/A	<b>Date of Issue:</b>	N/A

1.5 Existing Information			
<b>Existing Drawings</b>	JYM Partnership LLP Construction Issue drawings only. See tender documentation.		
<b>Existing Health and Safety Files</b>	Any existing Health & Safety files available from Client.		
<b>Asbestos Report/Register</b>	<b>Management Survey</b>	None.	<b>Date:</b> -
	<b>Refurbishment/Demolition Report</b>	None.	<b>Date:</b> -
	<b>Other Surveys of Interest</b>	None.	
	<b>Location of identified ACMs</b>	None.	
<b>Existing Services</b>	No information available.		

## 2.0 Site Construction and Management Requirements

2.1 Emergency and Fire Safety Arrangements
<p>The Principal Contractor must familiarise himself with any existing site fire precautions and evacuation procedures. Site operatives must be made aware at induction of what to do in an emergency.</p> <p>The Principal Contractor should ensure that a Site Fire Plan is prepared for the duration of the works and that all operatives are aware of the content.</p> <p>The Plan should include as a minimum:-</p> <ul style="list-style-type: none"> <li>• Method of raising alarm</li> <li>• Fire escape routes</li> <li>• Provisions for fighting fire</li> <li>• Name of First Aider / location of First Aid provisions</li> </ul>

## 2.2 Site Rules

The Principal Contractor is to prepare site rules he deems necessary, in order to safely manage and undertake the works. Site rules should be included in the construction phase plan document.

## 2.3 Permit to Work

The Principal Contractor must operate Permit to Work procedures for all work activities which are high risk.

The Contractor will be responsible for completing a Permit to Work before commencement of these works and liaising with the local management to ensure safety of the works.

## 2.4 Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995

The Principal Contractor is to ensure that RIDDOR is followed in the event of a notifiable accident.

## 3.0 Environmental Restrictions and Existing On-Site Restrictions

### 3.1 Site Establishment

<b>Location of Site Compound/Office:</b>	See JYM Drawings for suggested and available compound areas.
<b>Site access and Restrictions</b>	Access is directly off the highway. Principal Contractor is to liaise with Local Highway Authority to determine all licenses required to access all areas to complete the specified works and should also make appropriate allowance in their tender price for any associated costs.  Note: Land adjacent to the gable elevation (north) is owned by adjacent property.
<b>Contractor Parking:</b>	Parking available on street only in the locality of the property. Principal Contractor to make allowance for all charges and or permits required to park operative and construction vehicles for the project duration.
<b>Welfare Facilities During Works:</b>	Contractor will be able to use WC facilities for the duration of the works. Other welfare facilities TBC.
<b>Fire Assembly Point:</b>	To be determined and included in the Construction Phase Plan.
<b>Storage of Materials:</b>	Assume limited storage of materials will be required but contractor to make allowance. Some limited lockable storage space may be made available to the contractor on request.
<b>Location of Skips/Removal of Materials:</b>	Skips may have to be positioned on street due to space restrictions. Contractor to investigate and allow for all permits required.
<b>Additional Site Constraints</b>	-

### 3.2 Construction Area

<b>Segregation of Works from Site Occupants:</b>	Contractor to use HERAS fencing where required to separate the works from site occupants and general public.
<b>Segregation of Works from General Public:</b>	As above.

<b>Traffic and Pedestrian Routes:</b>	All traffic and pedestrian routes must be maintained at all times.
<b>Emergency Exits:</b>	Main and only exit to remain in use and is not to be blocked off by any construction operations.

### 3.3 Security Arrangements

Contractor to ensure that any access equipment is secure at the end of each working day whether it be fixed scaffold, temporary scaffold, MEWPs or ladders.

## 4.0 Significant Design and Construction Hazards

### 4.1 Information on Design Risks Identified During Design

As part of their duties, the designer shall ensure that where possible, significant construction health and safety risks have been designed out. However, where significant risks remain they are to be reviewed, identified and communicated to others by providing these hazards and controls to the Principal Designer.

These hazards and controls are to be reviewed throughout the project to ensure they are mitigated with appropriate control measures and any residual risks remaining on completion are recorded for the health and safety file.

### 4.2 Co-ordination of Design Work

Each element of design is required to be developed with due consideration for the health and safety of all concerned both during construction and subsequent occupancy and maintenance. Regular progress meetings will be held on site following an agreed agenda to include Design and Health and Safety considerations.

### 4.3 Co-ordination of Design Work

Any significant design or installation changes which occur during the construction phase are to be brought to the Principal Designer's attention by the Principal Contractor, and the Construction Phase Health & Safety Plan developed accordingly.

### 4.4 Significant Hazards Identified at Design Stage

The Principal Contractor shall ensure all significant risks identified and summarised in the table below are controlled and managed safely. Relevant method statements shall be made available for inspection within the Construction Phase Health & Safety Plan, 7 days prior to the identified activity commencing on site.

Activity	Who is Affected	Hazard Effect	S	L	R	Control Measures	Residual Risk
Executing roof works above live environments	Occupants	Falling materials and debris, ingress of construction materials	4	3	12	Specify overlay works to limit strip off required. Specify adhesive backed initial layers where other methods of adhering would be dangerous.	2 - Low
Executing roof works adjacent to residential area and footpath.	Occupants, Operatives	Conflict between construction works and building users.	4	3	12	Ensure Contractor installs segregation and protection measures between work areas and those areas used by occupants.	2 - Low
Contact with moving vehicles	Operatives, Public, Residents	Contact with moving vehicles, Collision etc.	5	3	15	Segregate areas of work with suitable barriers to protect members of the public / occupants and Construction Operatives. Provide suitable safety / warning signs to indicate to the general public where restricted areas are located. Provide barriers appropriate to task and location.	2 - Low
Accessing and working on high level roof areas and the like.	Operatives	Falls due to working at height	5	4	20	Contractor to assess for and provide all appropriate access equipment in order to access high level areas safely and in compliance with H&S legislation.  Contractor must carry out site survey to determine safe methods of access. Operatives installing and using the equipment to be skilled and appropriately trained.	2 - Low
Working on the public highway or footpath	Operatives, Public	Harm to the welfare of the General Public	5	3	15	Nearby area to be cordoned off during work. Correct PPE to be worn. Appropriate permits and licenses to be obtained.	2 - Low
Site security	Operatives	Theft and vandalism	1	5	5	All operatives to sign in / out of the Site Register daily. Stored materials and plant to be secured on daily basis. Building doors and windows to be secure when leaving work area or leaving site at end of day.	2 - Low
Fragile Materials	Operatives, Occupants	Falls through fragile surfaces i.e roof lights.	5	3	15	Contractor to carry out visual and physical inspections of work areas prior to using. Contract Administrator to be advised of any suspected safety issues. Contractor is to make allowance for any safety staging, barriers or decks required to complete the works in a safe manner	2 - Low
Asbestos	Operatives, Occupants	Contact with asbestos containing materials (ACMs) during	3	2	3	Very unlikely Asbestos will be detected due to the age of the building. Contractor site staff to remain vigilant and in the event of suspected ACMs being encountered, works should	1 – Very Low

Activity	Who is Affected	Hazard Effect	S	L	R	Control Measures	Residual Risk
		preparatory works.				cease in that area and the Contract Administrator should be notified so an appropriate course of action can be put in place.	

**S = SEVERITY**

6	Death
5	Major Injury (as defined by RIDDOR)
4	Reportable Injury (as defined by RIDDOR)
3	Acute Illness
2	Chronic Injury
1	Minor Injury

**L = LIKELIHOOD**

6	Highly Probable
5	Probable
4	Likely
3	Possible
2	Unlikely
1	Remote

**R = RISK ASSESSMENT FACTOR (on a scale of 1 to 36)**

1 to 5	Low Risk – Reduce further if possible
6 to 16	Medium Risk – Requires adequate resource levels
17 to 36	High Risk – Requires special provisions

## **5.0 Project Health and Safety File**

### **5.1 Format of the Health and Safety File**

Due to the size and scope of the works limited information will be required for the Health and Safety File. The Principal Designer will liaise with the Contractor close to completion of the works in order to determine any information which will need to be provided for the File, although this is likely to be limited in scope. Format of the File will be provided by the Principal Designer.

### **5.2 Delivery of the Health and Safety File**

It is the responsibility of the Principal Contractor to obtain all Health and Safety File information from the Sub-Contractors and provide it to the Principal Designer.

This information shall be provided at the latest, within seven working days of the Certificate of Practical Completion.



# Appendix C

## Bat Survey Final Report

## **Bat Advice Note: 29 Windy Street, Chipping**

### **Introduction**

Bowland Ecology Ltd was commissioned by JYM Partnership LLP to undertake an external building inspection survey at 2 Windy Street, Chipping, Lancashire (NOR: SD 62320 43216) to assess the potential of the building to support roosting bats. The building is subject to maintenance works, comprising the following:

- Raking out and repointing areas of cement mortar with lime mortar on the north facing gable end and the front elevation of the building
- Removing cement plaster and replacing with lime based plaster in bedroom
- Replacement of lead flashings on both chimney stacks
- Replacement of damaged stone flags on the front roof pitch and replacement of damaged slate flags on the rear roof pitch and
- Removal of small damaged area of ridge beam, adjacent to the northern gable end.

This advice note presents the survey results and makes an assessment of potential impacts to bats, with particular reference to legal requirements (Appendix A) and constraints to the proposed works. A plan showing the location of potential bat roosting features is shown in Appendix B.

### **Methodology**

#### *External Building Inspection*

The inspection survey was undertaken by Claire Wilson MSc, BSc (Hons) MCIEEM (Natural England Licence No: 2015-16761-CLS-CLS) and Jack Taylor on the 2<sup>nd</sup> March 2018. The weather during the inspection was dry, with scattered clouds, no breeze (Beaufort Scale 0) and an approximate temperature of 11°C. The survey followed the Bat Conservation Trust's 'Good Practice Guidelines' (Collins, 2016<sup>1</sup>). The external inspection involved checking for field signs of bats on external features of the building with particular attention being paid to ledges, walls, doors and the surrounding ground. The survey was aided with high powered torches and close focusing binoculars. An assessment of the potential of the building to support roosting bats was made during the survey i.e. searching for suitable roosting crevices.

Natural England's Bat Mitigation Guidelines (A.J. Mitchell-Jones, 2004<sup>2</sup>) states that a significant bat roost can normally be determined on a single visit at any time of the year, provided that the entire structure is accessible and that signs of bats have not been removed by others. An internal inspection could not be completed as no access into the roof void is present within the property. Using the information collected during the internal assessment, a 'roost potential' score was given to the building according to the criteria shown in Appendix C (Collins, 2016). An assessment of the suitability of the site for bats was also undertaken,

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<sup>1</sup> Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> Edition) The Bat Conservation Trust, London.

<sup>2</sup> Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*, English Nature, Peterborough.

including the identification of potential foraging and roosting areas, potential flight lines and important commuting corridors.

### *Dusk Emergence Survey*

Dusk emergence surveys were undertaken on the 1<sup>st</sup> May 2018 by Claire Wilson and Alice Helyar PhD, MSc, BSc (Hons), MCIEEM (Natural England Bat Licence No. 2015-1567-CLS-CLS) and on the 14<sup>th</sup> June 2018 by Jo Bates-Keegan BSc (Hons) (Natural England Bat Licence No. 2015-13046-CLS-CLS) and Dave Fisher BSc (Hons) (Natural England Bat Licence No. 2015-12106-CLS-CLS). The survey methodology followed the guidelines as described in Collins, 2016.

The survey on the 1<sup>st</sup> May commenced at 20:25 and ended at 22:10 and sunset was at 20:40. The weather during the survey was mild, with a moderate breeze (Beaufort Wind Scale 4/5) and occasional light rain showers. The temperature at the start of the survey was 9.7°C and 8.1°C at the end of the survey. The second survey on the 14<sup>th</sup> June commenced at 21:20 and ended at 21:15, sunset was at 21:42. The weather during the survey was bright, clear and dry, with a light breeze (Beaufort Wind Scale 1). The temperature at the start of the survey was 15°C and 12.2°C at the end of the survey.

The surveyors positioned themselves to get the best coverage of the building, and focused in on those areas with the most potential as roosting habitat (Appendix D). The survey was aided by the use of the following bat detectors: Bat Box Duet, Baton D, Anabat Express and Petterson D230.

The emergence surveys were completed at an appropriate time of year and the weather conditions were suitable, therefore a full assessment of the potential of the building to support roosting bats was undertaken.

## Results

### *Surrounding Habitats*

2 Windy Street is situated in the small village of Chipping, within the Forest of Bowland. The surrounding landscape is dominated by semi-improved grazed pasture and scattered blocks of woodland, with open moorland to the north and south-east. Based on a review of aerial photographs and Ordnance Survey maps, bat foraging habitat in the surrounding area includes frequent blocks of woodland and the tree lined, Chipping Brook. The woodlands offer favourable foraging habitat for species which prefer 'closed' habitats, including brown long-eared (*Plecotus auritus*) and Natterer's bats (*Myotis nattererii*). Open areas of grazed pasture provide suitable habitat for foraging noctule bats (*Nyctalus noctula*) who show a preference for 'open' habitats. The edges of the woodland blocks potentially provide suitable foraging and commuting habitat for bat species which show a preference for utilising 'edge' habitats. Such species include common pipistrelle (*Pipistrellus pipistrellus*) and whiskered (*Myotis mystacinus*) bats, which are flexible in their foraging habitat. Chipping Brook provides suitable foraging habitat for Daubenton's bats (*Myotis daubentonii*) which show a preference for foraging over water.

Scattered traditional buildings, mature trees, caves and kilns in the area provide potential roosting sites for a range of bat species.

The Forest of Bowland is considered to be an important area for bats. Surveys undertaken by Bowland Ecology Ltd, in addition to a research project currently being undertaken by Bowland Ecology staff and associates within the Hodder Valley, have found bats to be present within numerous lime kilns and caves close to the Site (within 5 km) which are used annually by hibernating bats. These sites are also known to form important autumn swarming sites for a number of bat species and are used sporadically at other times of the year.

Buildings in the wider area including the Inn at Whitewell (located approximately 5 km north east), Laundwood Pumping Station, Slaidburn Village Hall and Hodder Treatment Works are all known to house significant bat maternity roosts for a variety of species including common and soprano pipistrelle, myotis bats and brown long-eared bats.

In addition to the maternity, swarming and hibernation roosts in buildings, caves and kilns it is likely that many of the farm buildings in the Forest of Bowland are used by roosting bats during the summer and transitional periods.

#### *External Building Description*

The building is a two storey, stone built, traditional building comprising three separate residential dwellings with solid stone walls providing negligible hibernation potential (Plate 1). The roof is pitched with slate tiles and stone ridge tiles with solid stone walls. Timber framed windows and doors are present on the northern and southern building elevations with guttering present along the wall tops. Two chimney stacks, in good condition are located in the centre of the roof. Lead flashing present at the base of each chimney is slightly raised (Plate 2) offering potential roosting habitat for crevice dwelling bats.

The mortar between the stonework on the walls is generally well sealed, except on the wall tops where the eaves of roof are not flush with wall tops, creating a gap potentially allowing access into the internal space (Plate 3). House sparrows (*Passer domesticus*) were noted entering a gap above the lintel on the first floor window of number 31. The roof is lined with bitumen felt, some of which is coming away from roofing tiles at the eaves of the building creating a gap suitable for roosting bats and potentially providing access into the roof void.

Gaps are present beneath the ridge tiles on northern gable end, and several of the slate roof tiles are also raised creating roosting crevices for bats (Plate 4). Mortar is missing beneath the ridge tiles along the buildings southern elevation. Light ivy cladding is located on the north-eastern gable end (Plate 5).



Plates 1 and 2: North-west and eastern elevations of farmhouse & lifted lead flashing



Plates 3 and 4: Gaps on wall tops & gaps beneath tiles on northern gable end



Plate 5: Ivy cladding

The building is considered to provide **moderate potential** to support roosting bats, in accordance with guidance [Collins 2016]. However, no bats or their field signs were found during the external inspection of the property.

#### *Dusk Emergence Survey*

The initial emergence survey was carried out on the 1<sup>st</sup> May 2018. The survey commenced at 20:25 and ended at 22:10, sunset was at 20:40. The first bat recorded during the survey by surveyor 1 was a common pipistrelle was observed foraging in the mature sycamore [Acer pseudoplatanus] trees directly north of the building at 20:52. Only a single bat was observed at any one time and the foraging activity was relatively constant throughout the duration of the survey within the tree canopy. Occasionally, individual common pipistrelle

bats were observed commuting up and down the track to St. Mary's Church, located directly north of the building.

Surveyor 2, located to the north west of the building, on Windy Street observed more bat passes during the survey. The first bat, a common pipistrelle was observed emerging from houses on the opposite side of Windy Street, the bat then flew over the building into the mature sycamore trees. At 21:00 a soprano pipistrelle [*Pipistrellus pygmaeus*] was observed emerging from the roof tiles between the two chimneys on the building. During the survey a number of bats were recorded by surveyor 2 foraging and commuting around the building, these are detailed in Table 1 below.

The second dusk emergence survey was completed on the 14<sup>th</sup> June. The survey commenced at 21:20 and ended at 23:15, sunset was at 21:42. The first bat recorded during the survey was a common pipistrelle bat which emerged from a nearby building on the opposite side of Windy Street, recorded by surveyor 1. Surveyor 2 located on the street side of the building recorded their first bat, a common pipistrelle at 22:03. From 22:03 until 22:36 common pipistrelles were frequently noted foraging and commuting along the road and over the building. At 22:30 and 22:44 individual noctule bats were recorded commuting along Windy Street. Throughout the duration of the survey common and soprano pipistrelles were recorded foraging and commuting within the vicinity of the building, detailed results can be viewed in Table 1 below. No emergence from the building was recorded during the second survey.

Table 1: Bat activity

Survey 1: 1 <sup>st</sup> May 2018		
Time	Species	Activity
20:56	Common pipistrelle	Bat emerged from houses on opposite side of street, flew over building into trees
21:00	Common pipistrelle	Foraging around houses on opposite side of street
21:06	Soprano pipistrelle	<b>Emerged</b> from roof of building
21:10	Common pipistrelle	Foraging over wall into trees behind building
21:12	Common pipistrelle	Foraging along street
21:14	Common and soprano pipistrelle	Foraging around houses on the opposite side of the street
21:15	Noctule	Foraging around edge of building
21:25	Common and soprano pipistrelle	Continual foraging in trees behind building
21:48	Myotis sp.	Foraging over building into trees behind building
21:57	Myotis sp.	Foraging [heard, not seen]
21:58	Soprano pipistrelle	Foraging between woodland and street
21:50	Myotis sp.	Foraging in area

Survey 2: 14 <sup>th</sup> June 2018		
Time	Species	Activity
21:56	Common pipistrelle	Emerged from building on opposite side of Windy Street
21:58	Soprano pipistrelle	Foraging [heard, not seen]
22:03	Common pipistrelle	Commuting over building to the west
22:00	Common pipistrelle/soprano pipistrelle	Constant foraging over rear garden of building until 22:22
22:15	Common pipistrelle	Commuting west to east over building
22:25	Common pipistrelle	Commuting east to west just to the north of No. 2 Windy Street
22:26	Common pipistrelle	Two bats continuously foraging in garden until 22:40
22:27	Silent pass	Bat observed commuting west to east over building
22:28	Common pipistrelle	Two bats observed foraging in gardens on the opposite side of the road
22:31	Common pipistrelle	Two bats foraging along Windy street
22:32	Common pipistrelle	Foraging along street
22:36	Common pipistrelle	Four bats foraging along street
22:30	Noctule	Commuting along street to the south
22:44	Noctule	Commuting along street to the north west
22:45	Common pipistrelle	Brief foraging
22:52	Common pipistrelle	Brief foraging

### Conclusions and Recommendations:

No evidence of roosting bats was observed during the external inspection of the building however, a number of bat roosting opportunities were identified, including:

- Raised roofing tiles
- Gaps in masonry between the eaves of the building and the wall tops on the northern and southern building elevations
- Gaps beneath ridge tiles and
- Light ivy cladding.

Small gaps and crevices, such as those between slates, under ridge tiles and gaps in the wall tops, have the potential to be used by crevice dwelling bats such as pipistrelles, (*Pipistrellus pipistrellus*, *P.pygmaeus*, *P.nathusii*), whiskered bats and Brandt's bats (*M.brandtii*) and roid dwelling species, such as brown long-eared bats (*Plecotus auritus*), may also

utilise the loft void within the building, however, as previously described an internal inspection could not be completed.

A single common pipistrelle bat emerged from the building during the first emergence survey. As such, the building is considered to provide conditions to support a small day roost for individual, common species of bat. Therefore building is categorised as a roost of low conservation importance.

Proposed works comprise maintenance works to the walls and roof which supports very small numbers of roosting bats, during the active season (April to September inclusive). As such, works to the building would result in the loss of bat roosting habitat, the killing and injury of bats, and disturbance to roosting bats, which would result in an offence if bats were present at the time of works (see Appendix A).

As the proposed works to the building are temporary and minor, with the implementation of suitable mitigation (described below) impacts to roosting bats from the works will be negligible.

The following Reasonable Avoidance Measures (RAMs) described below will be adhered to throughout the duration of the works in order to ensure that impacts to bats are reduced to a negligible level:

- Before any works proceed, all contractors should be made aware of the possible presence of bats and the signs to look for (Appendix D).
- Prior to the commencement of works, and when scaffold has been erected, gaps in masonry and beneath ridge and roof tiles should be checked using an endoscope by a suitability qualified and licenced ecologist, to ensure no bats are present.
- Careful timing of works is recommended. For works to conform with best ecological practice, repair works will be scheduled to occur within the period of least impact to bats – (between October and March due to absence of hibernation potential). If undertaken in these periods, any roosting bats will be able to relocate to alternative roosts, although individual bats can be found at any time.
- Upon completion of the works gaps along the wall tops should be created to ensure the continuation of bat roosting habitat.
- Work should cease immediately if any bats are encountered at any stage and only resume once further advice from the project ecologist has been sought. If the bat is in immediate danger it should only be picked up with gloved hands and placed in a secure container with air holes in a dark, quiet place until the licenced ecologist arrives at site.

In addition to the potential of the building to support bats, house sparrows were noted during the initial visit to be roosting in the gaps in the eaves of the building. Therefore it is likely they are nesting in the building. As such, the removal and/or disturbance of the roof tiles could result in disturbance to nesting birds if it is carried out within the breeding bird season (March – September). Therefore works to remove the roof tiles will take place outside the nesting season which runs from March until August inclusive, in order to prevent impacts upon nesting birds.



If no works are undertaken on site within 12 months of this survey or if **any changes to the proposals and/or development timescales are made**, further bat surveys may be necessary due to the potential for colonisation of the site.

**Report prepared by:**

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**Report QA by:**

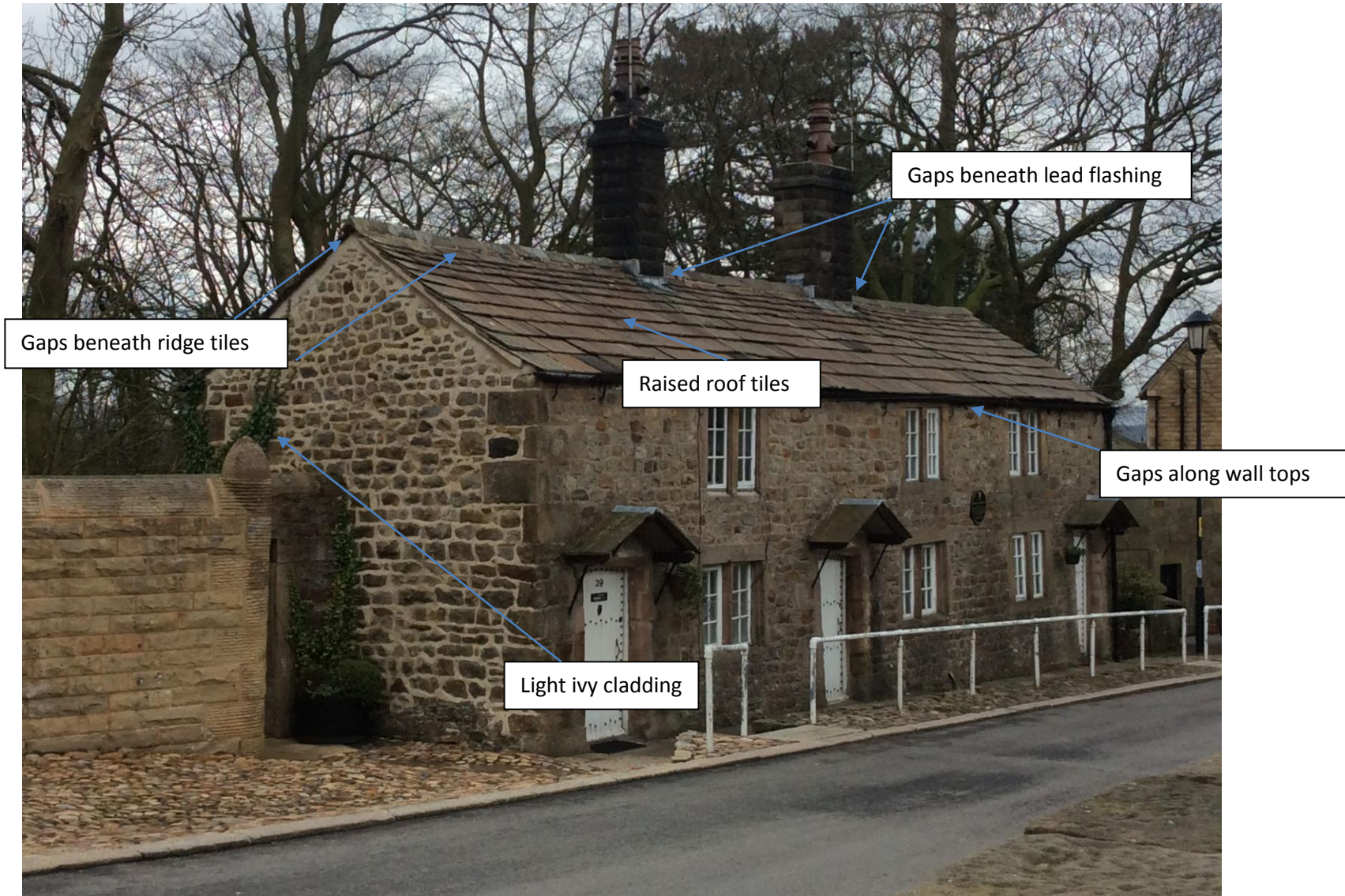
Lucy Elliff, MSc, BSc (Hons) MCIEEM, *Senior Ecologist*  
**Date:** 27/06/2018

## Appendix A – Legal Information

This report provides guidance of potential offences as part of the impact assessment. This report does not provide detailed legal advice and for full details of potential offences against protected species the relevant acts should be consulted in their original forms i.e. The Wildlife and Countryside Act, 1981, as amended, The Countryside and Rights of Way Act 2000, The Natural Environment and Rural Communities Act, 2006 and The Conservation of Habitats and Species Regulations 2017.

Species	Legislation	Offences	Notes on licensing procedures and further advice
<b>Species that are protected by European and national legislation</b>			
<b>Bats</b> <i>European protected species</i>	Conservation of Habitats and Species Regulations 2017 Reg 41	Deliberately <sup>1</sup> capture, injure or kill a bat Deliberate disturbance <sup>2</sup> of bats Damage or destroy a breeding site or resting place used by a bat. The protection of bat roosts is considered to apply regardless of whether bats are present.	An NE licence in respect of development is required in England. <i>European Protected Species: Mitigation Licensing- How to get a licence</i> [NE 2010] <i>Bat Mitigation Guidelines</i> [English Nature 2004] <i>Bat Workers Manual</i> [JNCC 2004] <i>BS8596:2015 Surveying for bats in trees and woodland</i> [BSI, 2015]
	Wildlife and Countryside Act 1981 [as amended] S.1	Intentionally or recklessly <sup>3</sup> obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place.	Licence from NE is required for surveys [scientific purposes] that would involve disturbance of bats or entering a known or suspected roost site.
<b>Birds</b>	Conservation of Habitats and Species [Amendment] Regulations 2017	N/A	Authorities are required to take steps to ensure the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat. This includes activities in relation to town and country planning functions.
	Wildlife and Countryside Act 1981 [as amended] S.1	Intentionally kill, injure or take any wild bird Intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built Intentionally take or destroy the nest or eggs of any wild bird. <b>Schedule 1 species</b> Special penalties are liable for these offences involving birds on Schedule 1 [e.g. most birds of prey, kingfisher, barn owl, black redstart, little ringed plover] Intentionally or recklessly <sup>3</sup> disturb a Schedule 1 species while it is building a nest or is in, on or near a nest containing eggs or young [intentionally or recklessly disturb dependent young of such a species.	No licences are available to disturb any birds in regard to development. Licences are available in certain circumstances to damage or destroy nests, but these only apply to the list of licensable activities in the Act and do not cover development. [General licences are available in respect of 'pest species' but only for certain very specific purposes e.g. public health, public safety, air safety. <a href="https://www.gov.uk/wild-birds-protection-surveys-and-licences">https://www.gov.uk/wild-birds-protection-surveys-and-licences</a> <a href="https://www.gov.uk/prevent-wild-birds-damaging-your-land-farm-or-business">https://www.gov.uk/prevent-wild-birds-damaging-your-land-farm-or-business</a>

## Appendix B – Potential Bat Roosting Features Plan



## Appendix C – Bat Roost Potential Criteria (Collins, 2016)

Suitability	Description of Roosting Habitat	Commuting & Foraging Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitats to be used on a regular basis or by a larger number of bats (i.e. unlikely to be suitable maternity or hibernation).</p> <p>A tree of sufficient size and age to contain potential roosting features but with none seen from the ground, or feature seen with only very limited roosting potential.</p>	<p>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status.	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging, such as trees, scrub, grassland or water.</p>
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis, and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	<p>Continuous high quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats, such as broadleaved woodland, tree-lined watercourses and graded parkland.</p> <p>Site is close and connected to known roosts.</p>

Appendix D – Bat Information for Contractors

# BATS



## Information, legal responsibilities and best practice for the construction industry

### Legal Protection

All UK Bat species are protected by European and UK law, in practical terms this means it is an offence to:

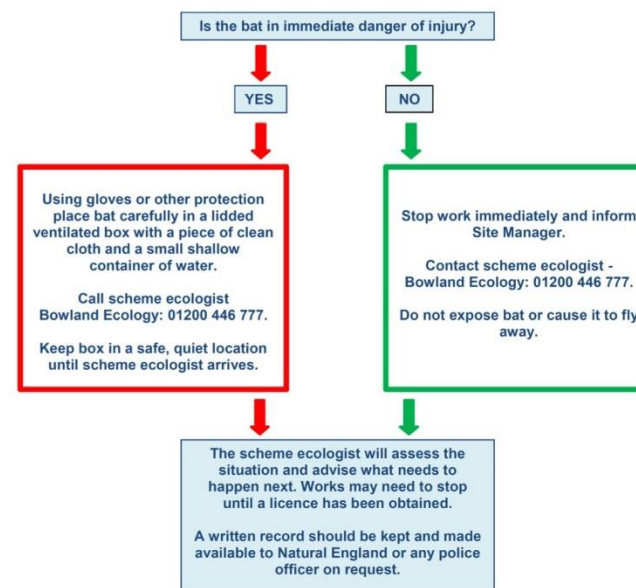
- Deliberately capture, injure or kill a bat;
- Deliberately disturb bats;
- Damage or destroy a breeding site or resting place (even if bats are not occupying the roost at the time);
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place;
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat.

Penalties on conviction: the maximum fine is £5,000 per incident or per bat (some roosts contain several hundred bats), up to six months in prison, and forfeiture of items used to commit the offence, e.g. vehicles, plant, machinery.

### Defences include:

1. Tending/caring for a bat solely for the purpose of restoring it to health and subsequent release.
2. Mercy killing where there is no reasonable hope of recovery (provided that person did not cause the injury in the first place – in which case the illegal act has already taken place).

### Found a bat during unsupervised works?

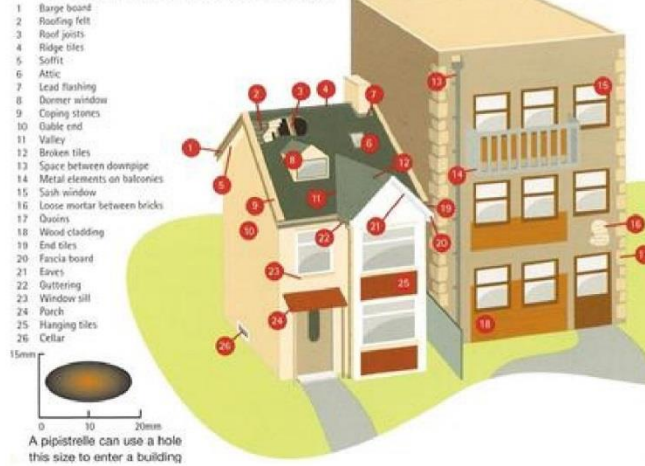


### Field signs of bat presence:

- Live or dead bats: the smallest UK bat species, the pipistrelle is only 3.5-4.5cm long.
- Droppings: bat droppings look like mouse droppings but will crumble between your fingers (they are dry and made entirely of insects).
- Feeding remains: piles of butterfly/moth wings are often left below bat feeding perches.



### Places that bats may use in buildings



Schematic from www.bats.org.uk

### Bats can roost in the following places:

- The top of gable end or dividing wall;
- The top of chimney breasts;
- Ridge and hip beams and other roof beams;
- Mortise and tension joints;
- All beams/ceilings/pipework (free hanging bats);
- The junction of roof timbers, especially where ridge and hip beams meet;
- Behind purlins;
- Between tiles and the roof lining;
- Under flat felt roofs;
- Under barge boards;
- In cavity walls;
- In cracks in stone or concrete;
- Behind peeling paint/wall coverings;
- Gaps behind window and door frames;
- Between window panes and timber boarding.
- In trees (cracks/holes/ivy cladding).

### Why wear gloves?

There is a small risk that some bats carry a rabies virus – European Bat Lyssavirus. The purpose of wearing gloves is to reduce the chance of being bitten, as the virus is transmitted via bat saliva. Thick leather gloves are appropriate for removing a bat from imminent danger but these should be clean.



In the event that you are bitten, wash the wound, gently but thoroughly, with soap and water. Speak to a health professional immediately, advising them that you have been bitten by a bat.

### References:

- Bat Conservation Trust. August 2016. Why wear gloves when handling bats?
- BCT Bat Surveys for Professional Ecologists, Good Practice Guidelines, 3<sup>rd</sup> Edition, 2016

## **Appendix D**

### **Mortar Analysis Results and New Specified Mix**

## MORTAR ANALYSIS REPORT

JOB REFERENCE	<b>Brabins Almshouses</b>	SAMPLE NUMBER	<b>1</b>	PAGE <b>1</b>
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ANALYSIS DATE	<b>July 2018</b>
SITE	<b>Brabins Almshouses</b>
CLIENT	<b>JYM Partnership</b>
DATE/ TAKEN RECEIVED	<b>July 2018</b>
CLIENT REQUIREMENTS	<b>Analyse mortar samples</b>
MORTAR DATING	<b>No</b>
LOCATION/ FUNCTION IN BUILDING	<b>Pointing Mortar</b>
ENCLOSURES	<b>Aggregate Sample</b>
CONDITION OF SAMPLE RECEIVED/ COLLECTED	<b>A Few Solid Pieces</b>

### GENERAL COMMENTS/ SUMMARY

**A cement/lime binder rich mortar made with washed river sand**

**SUGGESTED REPLACEMENT MORTAR** (Taking account of prevailing site conditions, building materials and condition, location and function of the new mortar, building details, exposure, seasonal working etc.)

**A weaker lime based mortar with strength and permeability suitable to its location. We would suggest a mix of 1 part Ionic Old White NHL3.5: 1.5 parts Leighton Buzzard Sand: 1.5 parts Nosterfield Sand**

## MORTAR ANALYSIS REPORT

JOB REFERENCE	<b>Brabins Almshouses</b>	SAMPLE NUMBER	<b>1</b>	PAGE <b>2</b>
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### ANALYTICAL PROCEDURES

The selected sample of material was dried, weighed and examined both by eye and under a binocular microscope at x 20 magnification. The sample was crushed, the binder separated from the aggregate by dissolution in dilute hydrochloric acid and the relative proportions of binder (lime, cement and gypsum) to aggregate determined. Aggregate (and other acid-insoluble materials) characterisation was undertaken by means of sieve separation and further microscopic examination.

The analysis and interpretation provide information on the composition and characteristics of the mortar sample(s) received by us. Assuming that the sample was representative of the mortar generally, then analysis will give a reasonable indication of the original materials and provide a basis for specification of repair or replacement mortars.

If more detailed information is required (for example for purposes of historic research) more sophisticated analytical procedures can be undertaken to determine chemistry and mineralogical composition.

### MORTAR EXAMINATION AND ANALYSIS

PROCEDURE	DESCRIPTION / COMMENTS
PRELIMINARY EXAMINATION OF SAMPLE BY EYE	A dirty cream colour, with visible brown and black aggregate
EXAMINATION OF PREPARED SAMPLE BY BINOCULAR MICROSCOPE x20 MAG	A creamy well distributed binder coating rounded small stones and quartz grains



## MORTAR ANALYSIS REPORT

JOB REFERENCE	<b>Brabins Almshouses</b>	SAMPLE NUMBER	<b>1</b>	PAGE <b>3</b>
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### *ACID DISSOLUTION*

PROCEDURE	DESCRIPTION ~ COMMENTS
10% HCL ACID DISSOLUTION	Some initial reaction which soon died down
FILTER GRADE (PORE SIZE) & TYPE	Whatman Type 1

### *AGGREGATE SEPARATION*

BS SIEVE Mesh Size	Residue Retained	Undissolved binder %	Aggregate wt excluding undissolved binder	Aggregate weight %	Comments
<b>10.00 mm</b>	0	0	0	0	-
<b>5.00 mm</b>	0	0	0	0	-
<b>2.36 mm</b>	2.1	0	2.1	3	-
<b>1.18 mm</b>	3	0	1.6	5	Small pieces of sedimentary stone
<b>0.60 mm (600µm)</b>	13.3	15	8.7	14	Predominantly quartz sand grains (r) brown, yellow and cream held together by un-dissolved binder
<b>300 µm</b>	31	5	32.3	45	Clear and cream quartz grains (r) with un-dissolved binder clinging to them
<b>150 µm</b>	36.5	35	20.3	33	Un-dissolved binder and clear quartz grains (r)
<b>&lt; 150 µm including filter residue</b>	15	85	2	3	Predominantly un-dissolved binder with some sand grains (r)

a = angular fragments; sa subangular; sr = sub-rounded; r = rounded

## MORTAR ANALYSIS REPORT

JOB REFERENCE	<b>Brabins Almshouses</b>	SAMPLE NUMBER	<b>1</b>	PAGE <b>4</b>
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### AGGREGATE CHARACTERISTICS

**The original sand composed of sedimentary rock fragments and buff, brown and clear quartz.**

Because sand and gravel aggregates are ultimately derived from the weathering of solid rock most aggregates contain coarse grained rock fragments and finer mineral grains. Weathering breaks down the rock fragments within the aggregate into the constituent minerals, resulting in smaller and rounder particles; chemical weathering breaks down unstable minerals, such as feldspars, into clays which may be washed away, both processes eventually result in a quartz-rich sand.

### CONSTITUENTS OF ANALYSIS SAMPLE

<i>MATERIAL</i>	<i>WEIGHT (g)</i>	<i>COMMENTS</i>
<b>A:</b> DRY WEIGHT OF- ANALYSIS SAMPLE	118	Difficult to crush at first
<b>B:</b> DRY WEIGHT OF ALL INSOLUBLES	97	
<b>C:</b> DRY WEIGHT OF INSOLUBLE BINDER	29	
<b>D:</b> (B-C) DRY WEIGHT OF AGGREGATE	68	
<b>E:</b> (A-(D+C)) DRY WEIGHT OF LIME	21	
OTHER	-	

## MORTAR ANALYSIS REPORT

JOB REFERENCE	<b>Brabins Almshouses</b>	SAMPLE NUMBER	<b>1</b>	PAGE <b>5</b>
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### *PROPORTIONS OF ANALYSIS SAMPLE*

The sample proportions gives the relative weights of aggregate and carbonated or set lime.

#### *LIME: CEMENT: AGGREGATE RATIO*

**2/3 : 1 : 6**

### *PROBABLE ORIGINAL MIX*

The probable original mix set out below gives the relative weights of the mortar constituents as mixed on site and before carbonation. From the nature of the binding matrix of the mortar sample and from information gained from the analysis it is probable that the mortar was made up from a combination of 1 part lime: 1 parts cement : 6 parts of a sand, by Volume

Sample analysis, interpretation and report carried out by: Mark Womersley