DIOCESAN ADVISORY COMMITTEE

SCHEDULE OF DOCUMENTS

1. **Location Plan** (P17-034-100 Location Plan-1.0.pdf)
2. (St Mary Baldock_210518_153739.pdf)
3. (P17-034 Specification Faculty Approval Issue_COMPLETEpdf.pdf)
4. **Plan** (P17-034-101 Plan-1.0.pdf)
5. **Elevations West & East** (P17-034-102 West & East-1.0.pdf)
6. **Elevations North** (P17-034-103 North-1.0.pdf)
7. **Elevations South** (P17-034-104 South-1.0.pdf)
8. **Heat Survey Report** (REV.1.St Marys Church - Thermal Report-01.03.2021.pdf)
9. **Statement on Insulation Provision** (St Mary's Baldock Insulation Assessment.docx)
10. (Roof ventilation and insulation update August 2021.pdf)
11. (Surveyor's responses to DAC queries May 2021.pdf)
12. (Roof email from surveyor Oct 2021.pdf)
13. **Statement of Significance** (St Mary's Baldock Statement of Significance and Need 2021.docx)

TO THE CHANCELLOR OF
THE DIOCESE OF ST ALBANS

13/10/2021

VIEWED by the St Albans Diocesan
Advisory Committee

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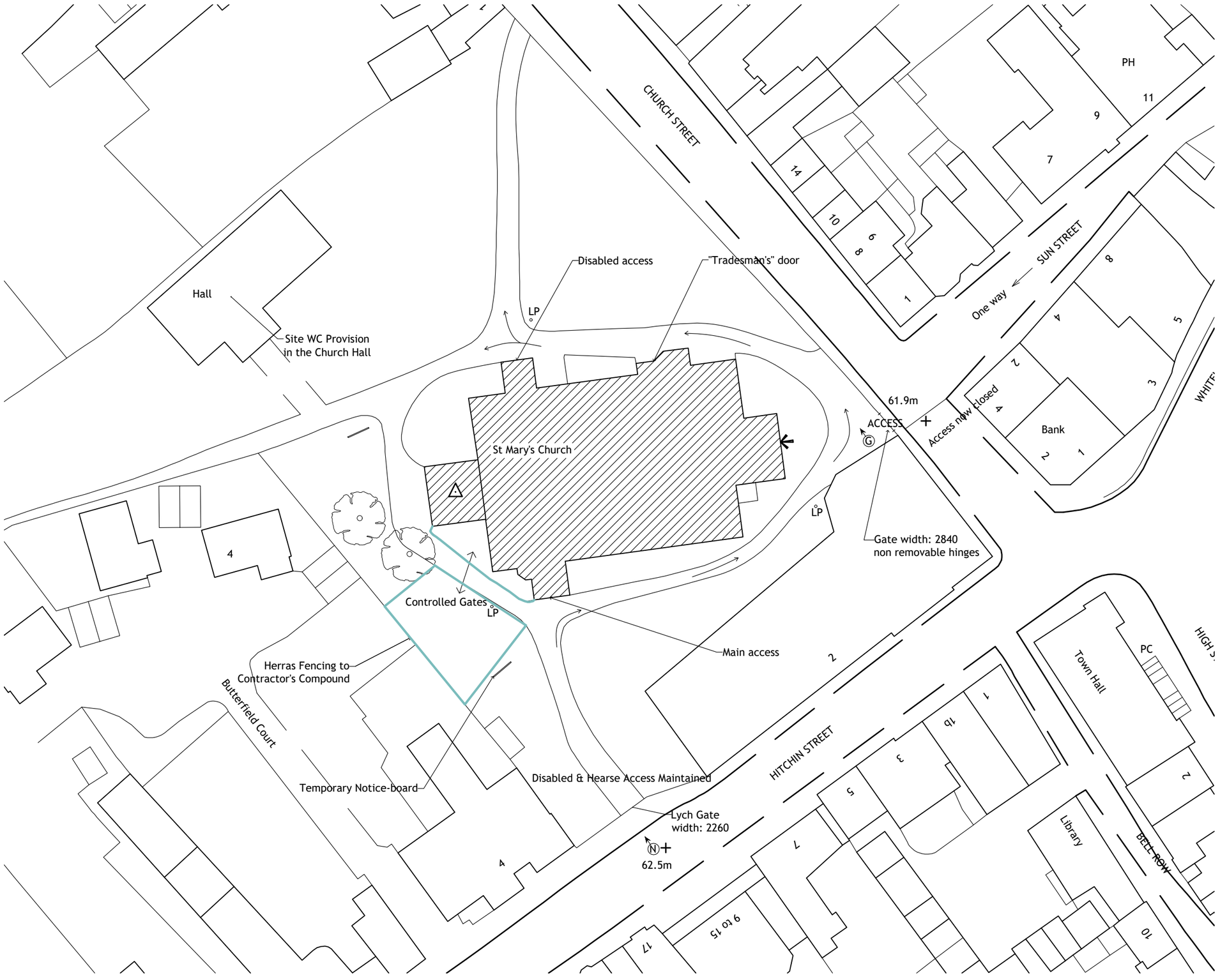
NOTES:
DO NOT SCALE FROM THIS DRAWING. ALL LEVELS, ANGLES AND DIMENSIONS TO BE CHECKED ON SITE PRIOR TO COMMENCEMENT OF WORKS.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL ENGINEERS AND MECHANICAL AND ELECTRICAL ENGINEERS DRAWINGS, DETAILS AND SPECIFICATIONS.

Revisions:

/ FIRST ISSUE 26 Jan 2021

0 5 10 15 20 25 50 Scale 1:500 (metres)



Status:
Tender Issue

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Client:
PCC St Mary the Virgin Church

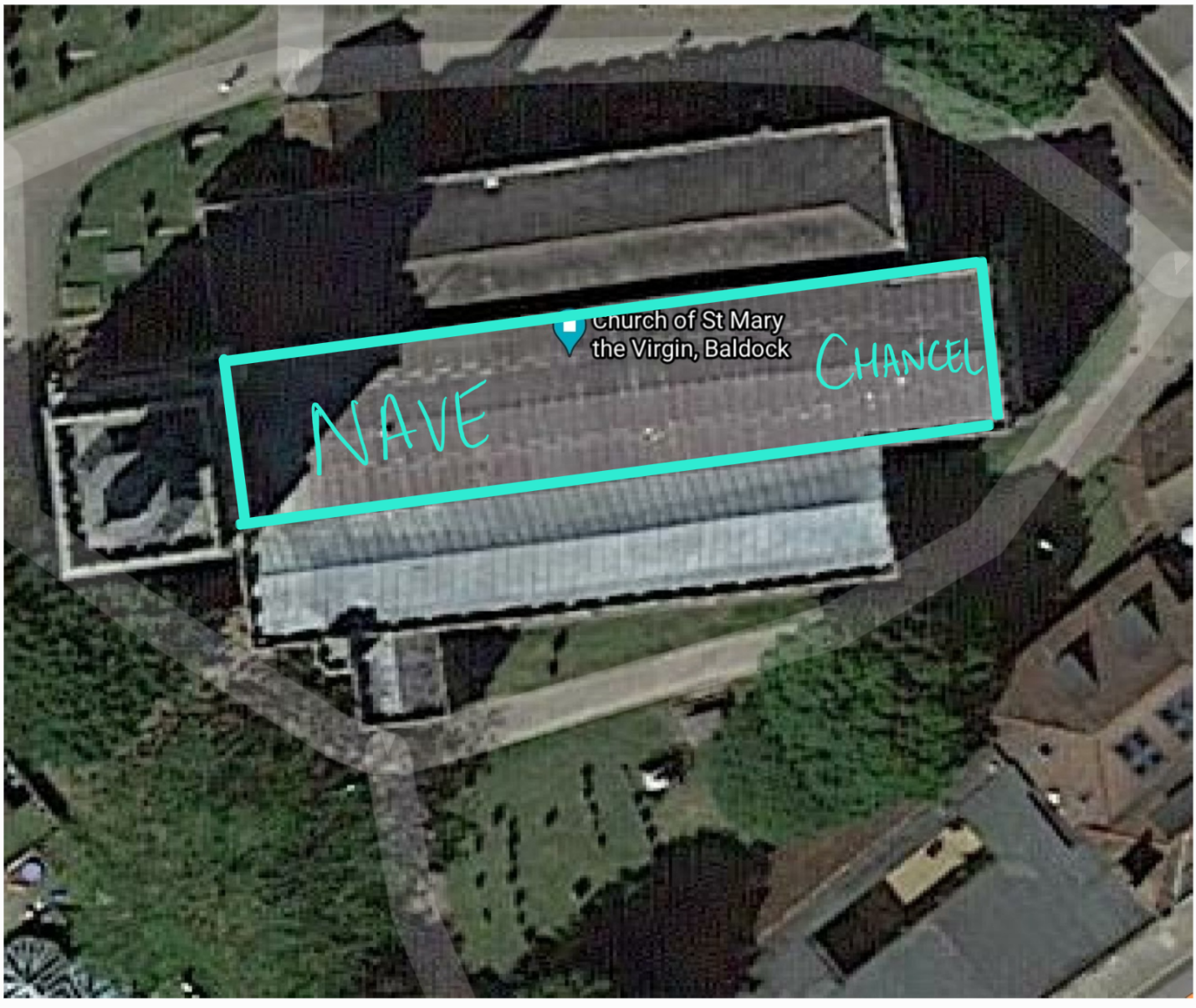
Project:
Nave & Chancel Roofing

St Mary the Virgin Church
Church Street
Baldock

Title:
Location Plan

Scale @A3:	Date:	Drawn:	Checked:
~1:500	Record	-	-

Drawing no.: BA / P17-034-100 Revision: /


Church of St Mary
the Virgin, Baldock
NAVE
CHANCEL

Specification of Works

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Essex CM77 7AA

Nave & Chancel Roof Repairs

St Mary the Virgin Church

Church Street

Baldock

SG7 5AE

BA Ref: P17-034

October 2021

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Registered office address: Majesty House, Avenue West, Skyline 120, Braintree, Essex CM77 7AA

RIBA Chartered Practice

RICS

Contents Page

Nave & Chancel Roof Repairs
St Mary the Virgin Church
Church Street
Baldock
SG7 5AE

Prepared For and on Behalf of:

PCC St Mary the Virgin Church
St Mary the Virgin Church
Church Street
Baldock
SG7 5AE

BA Job Ref.	P17-034
Document Type	Specification of Works
Version & Revision	Faculty Approval Issue ~~Tender Issue~~
Date of printing	01 October 2021
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Prepared by	Philippa Gould MRICS
Authorised for issue by	Philippa Gould MRICS
Date of issue	~~27 January 2021~~01 October 2021

Section	Contents & Collection	No. Pages	Cost £
-	Form of Tender	1	
Section 1	Preliminaries	33	£
Section 2	Preambles	29	N/A
Section 3	Schedule of Works	8	£
Appendix A :	Scaffolding Specification	6	£
Appendix B:	Photographs	2	
Appendix C:	Record Drawings	5	
	Pre-Construction Information Pack*		£
	*Separate Document		
	TOTAL TO TENDER		

Form of Tender

Nave & Chancel Roof Repairs

AT

St Mary the Virgin Church
Church Street
Baldock
SG7 5AE

For and on behalf of:
(Company Name) _____
Signature: _____
Print Name: _____
Company Address: _____
_____
Company Registration Number: _____
Date: _____

Dear Sirs,

I/We the undersigned, having read all the Tender Documentation delivered to me/us, and having examined all the documents referred to therein, do hereby offer to fully execute the whole of the Works and our Services in accordance with the Conditions of Contract for the fixed price sum of:

£ _____ (amount in words) excl VAT

£ _____ (amount in figures) excl VAT

based on an overall period for completion of the Works of _____ (weeks)

ALTERNATIVE TENDER

£ _____ (amount in words) excl VAT

£ _____ (amount in figures) excl VAT

based on an overall period for completion of the Works of _____ (weeks)

and based on an alternative specification, to meet all design, performance, planning requirements and the like; all proposals subject to approval of the Contract Administrator.

It is a requirement that a priced schedule of proposed savings is to accompany your tender.

I/We hereby declare that

This is a bona fide tender intended to be competitive and the amount of the tender has not been fixed or adjusted by or under or in accordance with any agreement or arrangement with any other person.

The amount or approximate amount of the proposed tender has not been communicated to a person other than the person calling for tenders.

I/We have not entered into any agreement with any other person that he shall refrain from tendering or as to the amount of any tender to be submitted.

The tender price submitted is on a fixed price basis.

The tender price submitted includes _____% for overheads and profit.

I/We agree that this tender shall remain open for acceptance within the period stated in A30/190 from the date for receipt of tenders.

I/We understand that the Employer is not contractually bound to consider all or any timely and conforming tenders nor to accept the lowest or any tender and that the Employer will not be responsible for any costs involved in the preparation of the tender.

If this tender should be accepted I/We hereby agree that this tender, together with your official order, the tender documents and drawings will constitute a Contract between the Client and me/us.

Your tender should be delivered in an unmarked envelope to the address below, clearly stating that it is a tender return:

Barker Associates
Majesty House
Avenue West , Skyline 120
Braintree, Essex CM77 7AA

Tenders to be returned no later than **2pm on 17 March 2021**

Section 1: Preliminaries

A10
Project particulars UNCHANGED

Clauses

110 The Project

1. Name: Nave and Chancel Roof Repairs
2. Nature: Lead roof replacement and masonry repairs
3. Location: St Mary the Virgin Church, Church Street, Baldock, Hertfordshire
4. Timescale for construction work: TBA by contractor

120 Employer (client)

1. Name: PCC St Mary the Virgin Church
2. Address: St Marys Church, Church Street, Baldock, Hertfordshire
3. Contact: Rev'd Andrew Holford
4. Telephone: 01462 892 838
5. E-mail: 2008luddite@gmail.com

130 Principal contractor (CDM)

1. Name: TBA

140 Architect/ contract administrator

1. Name: Barker Associates
2. Address: Majesty House, Avenue West, Skyline 120, Braintree, CM77 7AA
3. Contact: Philippa Gould
4. Telephone: 01279 648 051
5. Email: pgould@barker-associates.co.uk

150 Principal designer

1. Name: As Clause 140

Ω End of Section

A12
The site/ existing buildings UNCHANGED

Clauses

110 The site

1. Description: Grade I Church, graveyard and hall

120 Existing buildings on/ adjacent to the site

1. Description: Residential, Commercial, Educational (Nursery)

200 Access to the site

1. Description: Via Church Street or the Lych Gate from Hitchin Road
2. Limitations: Narrow entrances and brick walls to both entrances - suitable protection required for large plant
3. Access for inspections: Provide access at reasonable times for both on-site and off-site work.

210 Parking

1. Restrictions on parking of the Contractor's and employees' vehicles: 2no. contractor vehicles permitted on site

220 Use of the site

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

240 Health and safety hazards

1. 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:
   1.1. Graves- Unknown vaults- Unidentifed asbesots- Lime- Lead - Guano- Decaying Timber Structures.
2. Information: The accuracy and sufficiency of this information is not guaranteed. Ascertain if any additional information is required to ensure the safety of all persons and the Works.
3. 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

1. Assessment: Ascertain the nature of the site, access thereto and all local conditions and restrictions likely to affect the execution of the Works.
2. Arrangements for visit: Phil Charsley 01462 895 665 / 07817 801616

Ω End of Section

A13
Description of the work UNCHANGED

Clauses

120 The works

1. Description: Refurbishment of the Nave and Chancel Roofs, masonry repairs to the Chancel and South Tower

Ω End of Section

A20
JCT minor works building contract with contractor's design (MWD)

REVISED

Clauses

JCT minor works building contract with contractor's design

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

The recitals

First - The Works and the Contract Administrator

- The work comprises: Refurbishment of the Nave and Chancel Roofs and rainwater goods. Repairs to Chancel and South Tower Masonry
- Architect/ Contract Administrator: See clause A10/140.

Second - Contractor's designed portion REVISED

- The Works include the design and construction of
  - Scaffolding Design.
  - Mechanical & Electrical Works to alter and tidy cables around Tower Access Door onto the Nave Roof.
  - North Aisle Access Ladder

Third - Contract documents

- Contract drawings: As listed in clause A11/120.
- Contract documents: The following have been prepared which show and describe the work to be done A Specification, including employer's requirements for the design and construction of the Contractor's designed portion.

Fourth - Priced documents

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

Articles

3 - Architect/ Contract Administrator

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

4 and 5 - Principal Designer/ Principal Contractor

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

Contract particulars

Fifth Recital and Schedule 2 - Base date

- Base date: 10 days before tender return

Fifth Recital and clause 4.2 - Construction industry scheme (CIS)

- Employer at base date is not a 'contractor' for the purposes of the CIS.

Sixth Recital - CDM Regulations

- The project is not notifiable.

Eighth 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 Applies.
- Notification and negotiation of disputes: Supplemental Provision 6 Applies.
- Where Supplemental Provision 6 applies, the respective nominees of the parties are
  - Employer's nominee: To be advised
  - Contractor's nominee: TO BE COMPLETED BY CONTRACTOR
- 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 2.3 - Commencement and Completion

- Works commencement date: To be confirmed at pre-start meeting following successful funding. Anticipated Spring/Summer 2021
- Date for Completion: Six Months after commencement

Clause 2.9 - liquidated damages

- At the rate of £500 per week.

Clause 2.11 - Rectification period

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

Clause 4.3 - Interim payments

- Interim Valuation Dates
  - The first Interim Valuation Date is: 4 weeks after commencement
  - Thereafter at intervals of: monthly

- Payments due prior to practical completion
  - Percentage of total value of the work etc.: 95%
- Payments becoming due on or after practical completion
  - Percentage of the total amount to be paid: 97.5%

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 n/a.

Clause 4.8.1 - Supply of documentation for computation of amount to be finally certified

- Period: one month 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: £5million

Clauses 5.4A, 5.4B and 5.4C - Insurance of the works, etc. - alternative provisions

- Clause 5.4B applies.
- Where clause 5.4A or 5.4B applies, percentage to cover professional fees: 15%

Clause 7.2 - Adjudication

- The Adjudicator is: to be nominated
- 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 - No Amendments

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 - No Amendments

Section 3: Control of the Works - No Amendments

Section 4: Payment - No Amendments

Section 5: Injury, Damage and Insurance - No Amendments

Section 6: Termination - No Amendments

Section 7: Settlement of Disputes - No Amendments

Execution

Execution

- The contract: Will be executed under hand.

Contract guarantee bond - No Amendments

Ω End of Section

A30
Tendering/ subletting/ supply UNCHANGED

Main contract tendering

110 Scope

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

145 Tendering procedure

1. General: In accordance with NBS Guide to Tendering for Construction Projects.
2. Errors: Alternative 2 is to apply.

160 Exclusions

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

170 Acceptance of tender

1. 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.
2. Costs: No liability is accepted for any cost incurred in the preparation of any tender.

190 Period of validity

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

Pricing/ submission of documents

210 Preliminaries in the specification

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

250 Priced documents

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

310 Tender

1. 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

1. Method statements: Prepare, describing how and when the following is to be carried out:
   1.1. Outline of scaffolding proposal design. Full design not required but indication as to what level of scaffold will be provided to protect the Church.
2. Statements: Submit with the tender.

530 Substitute products

1. 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.
2. Compliance: Substitutions accepted will be subject to the verification requirements of clause A31/200.

Subletting/ supply - No Amendments

Ω End of Section

A31
Provision, content and use of documents REVISED

Definitions and interpretations

110 Definitions

1. Meaning: Terms, derived terms and synonyms used in the preliminaries/ general conditions and specification are as stated here or in the appropriate referenced document.

120 Communication

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

130 Products

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

135 Site equipment

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

145 Contractor's choice

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

150 Contractor's Design

1. Meaning: Design to be carried out or completed by the Contractor and supported by appropriate contractual arrangements, to correspond with specified requirements.

155 Submit proposals

1. Meaning: Submit information in response to specified requirements.

160 Terms used in specification

1. 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 removal and disposal of associated pipework, wiring, ductwork or other services.

2. Remediate: Action or measures taken to lessen, clean up, remove or mitigate the existence of hazardous materials; in accordance with standards, or requirements as may be set out by statutes, rules, regulations or specification.
3. Fix: Receive, unload, handle, store, protect, place and fasten in position; dispose of waste and surplus packaging. To include all labour, materials and site equipment for that purpose.
4. Supply and fix: As above, but including supply of products, components or systems to be fixed, together with everything necessary for their fixing. All products, components or systems are to be supplied and fixed unless stated otherwise.
5. Keep for reuse: Do not damage designated products or work. Clean off bedding and jointing materials. Stack neatly, protect adequately and store until required by the employer/ purchaser, or until required for use in the works as instructed.
6. Keep for recycling: As 'keep for reuse', but relates to a naturally occurring material rather than a manufactured product.
7. Make good: Execute local remedial work to designated work. Make secure, sound and neat. Excludes redecoration and/ or replacement.
8. Replace: Supply and fix new products matching those removed. Execute work to match original new state of that removed.
9. Repair: Execute remedial work to restore something to its original working state. Make secure, sound and neat. Excludes redecoration and/ or replacement.
10. Refix: Fix removed products.
11. Ease: Adjust moving parts of designated products, or work to achieve free movement and good fit in open and closed positions.
12. 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.
13. System: Equipment, accessories, controls, supports and ancillary items (including installation) necessary for that section of the work to function.

170 Manufacturer and product reference

1. Definition: When used in this combination:
   1.1. Manufacturer: the person or legal entity under whose name or trademark the particular product, component or system is marketed
   1.2. Product reference: the proprietary brand name and/ or identifier by which the particular product, component or system is described.
2. Currency: References are to the particular product as specified in the manufacturer's technical literature current on the date of the invitation to tender.

200 Substitution of products

1. Products: If an alternative product to that specified is proposed, obtain approval before ordering the product.
2. Reasons: Submit reasons for the proposed substitution.
3. Documentation: Submit relevant information, including:
   3.1. manufacturer and product reference;
   3.2. cost;
   3.3. availability;

3.4. relevant standards;
3.5. performance;
3.6. function;
3.7. compatibility of accessories;
3.8. proposed revisions to drawings and specification;
3.9. compatibility with adjacent work;
3.10. appearance;
3.11. copy of warranty/ guarantee.

4. Alterations to adjacent work: If needed, advise scope, nature and cost.
5. Manufacturers' guarantees: If substitution is accepted, submit before ordering products.

210 Cross references

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

220 Referenced documents

1. Conflicts: Specification prevails over referenced documents.

230 Equivalent products

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

240 Substitution of standards

1. 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.
2. Before ordering: Submit notification of all such substitutions.
3. 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

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

260 Sizes

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

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

Documents provided on behalf of the employer

460 The specification

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

Documents provided by contractor/ subcontractors/ suppliers

600 Contractor's Design information

1. General: Complete the design and detailing of parts of the Works as specified.
2. Provide
   2.1. Production information based on the drawings, specification and other information.
   2.2. Liaison to ensure coordination of the work with related building elements and services.
3. Master programme: Make reasonable allowance for completing design/ production information, submission (including information relevant to the CDM Regulations), comment, inspection, amendment, resubmission and reinspection.
4. Information required: As outlined in Scaffolding Appendix. Mechanical and Electrical Details - TBA when required
   4.1. Format: electronic
   4.2. Number of copies: 1
5. Submit: Within one week of request.

640 Maintenance instructions and guarantees

1. Components and equipment: Obtain or retain copies, register with manufacturer and hand over on or before completion of the Works.
2. Information location: In Building Manual.
3. Emergency call out services: Provide telephone numbers for use after completion. Extent of cover: not required.

Deleted clauses

450 Measured quantities DELETED

Ω End of Section

A32
Management of the works UNCHANGED

Generally

110 Supervision

1. General: Accept responsibility for coordination, supervision and administration of the Works, including subcontracts.
2. 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

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

125 Professional Indemnity Insurance

1. Provide and maintain insurance in respect of Contractor Designed Works
   1.1. Level of cover: Relates to claims or series of claims arising out of one event
   1.2. Period of insurance for these purposes: 1 year
2. Amount of indemnity required: £ 2 million.
3. Limit of cover for pollution/ contamination claims (If none is stated, the required level of cover shall be the full amount of the indemnity cover stated): £ n.a.
4. Expiry of required period of CDP Professional Indemnity insurance: six years
5. (If no period is selected, the expiry date shall be 6 years from the date of practical completion of the Works).
6. Documentary evidence: Submit details before starting work on site and/ or policies and receipts for the insurances required.
   6.1. Format: electronic

130 Insurance claims

1. 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/ client, the person administering the Contract on their behalf and the Insurers.
2. Failure to notify: Indemnify the employer/ client against any loss, which may be caused by failure to give such notice.

140 Climatic conditions

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

150 Ownership

1. 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

1. 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:
   1.1. Planning and mobilisation by the Contractor
   1.2. Subcontractor's work.
   1.3. Running in, adjustment, commissioning and testing of all engineering services and installations.
   1.4. Work resulting from instructions issued in regard to the expenditure of provisional sums.
   1.5. Work by others concurrent with the Contract.
2. Submit one copy.

245 Start of work on site

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

250 Monitoring

1. Progress: Record on a copy of the programme kept on site.
2. 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.
3. Key Performance Indicators
   3.1. Details: N/A
   3.2. Performance: Record progress against each KPI.
   3.3. Corrective action: If performance falls below target, submit proposals as soon as possible.

260 Site meetings

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

290 Notice of completion

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

310 Extensions of time

1. 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.
2. Details: As soon as possible submit:
    2.1. Relevant particulars of the expected effects, if appropriate, related to the concurrent causes.
    2.2. An estimate of the extent, if any, of the expected delay in the completion of the Works beyond the date for completion.
    2.3. All other relevant information required.

Control of cost

420 Removal/ replacement of existing work

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

430 Proposed instructions

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

440 Measurement

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

450 Daywork vouchers

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

470 Products not incorporated into the Works

1. 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.
2. Evidence: When requested, provide evidence of freedom of reservation of title.

Ω End of Section

A33
Quality standards/ control UNCHANGED

Standards of products and executions

110 Incomplete documentation

1. General: Where and to the extent that products or work are not fully documented, they are to be:
   1.1. Of a kind and standard appropriate to the nature and character of that part of the Works where they will be used.
   1.2. Suitable for the purposes stated or reasonably to be inferred from the project documents.
2. 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

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

130 Quality of products

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

135 Quality of execution

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

140 Evidence of Compliance

1. Proprietary products: Retain on site evidence that the proprietary product specified has been supplied.
2. Performance specification: Submit evidence of compliance, including test reports indicating:
   2.1. Properties tested.
   2.2. Pass/ fail criteria.
   2.3. Test methods and procedures.
   2.4. Test results.
   2.5. Identity of testing agency.

2.6. Test dates and times.

2.7. Identities of witnesses.

2.8. Analysis of results.

150 Inspections

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

160 Related work

1. 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:
   1.1. Appropriately complete.
   1.2. In accordance with the project documents.
   1.3. To a suitable standard.
   1.4. In a suitable condition to receive the new work.
2. Preparatory work: Ensure all necessary preparatory work has been carried out.

170 Manufacturer's recommendations/ instructions

1. General: Comply with manufacturer's printed recommendations and instructions current on the date of the Invitation to tender.
2. Exceptions: Submit details of changes to recommendations or instructions.
3. Execution: Use ancillary products and accessories supplied or recommended by main product manufacturer.
4. Products: Comply with limitations, recommendations and requirements of relevant valid certificates.

180 Water for the works

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

Samples/ approvals

210 Samples

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

220 Approval of products

1. Submissions, samples, inspections and tests: Undertake or arrange to suit the Works programme.
2. 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.
3. Complying sample: Retain in good, clean condition on site. Remove when no longer required.

230 Approval of execution

1. Submissions, samples, inspections and tests: Undertake or arrange to suit the Works programme.
2. 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.
3. Complying sample: Retain in good, clean condition on site. Remove when no longer required.

Accuracy/ setting out generally

320 Setting out

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

330 Appearance and fit

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

Services generally

435 Electrical installation certificate

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

450 Mechanical and electrical services

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

Supervision/ inspection/ defective work

525 Access

1. 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.
2. Designate: Contract Administrator

530 Overtime working

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

540 Defects in existing work

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

560 Tests and inspections

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

610 Defective products/ executions

1. 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.
2. Acceptability: Such proposals may be unacceptable and contrary instructions may be issued.

Work at or after completion

710 Work before completion

1. General: Make good all damage consequent upon the Works.
2. Temporary markings, coverings and protective wrappings: Remove unless otherwise instructed.
3. Cleaning: Clean the Works thoroughly inside and out, including all accessible ducts and voids. Remove all splashes, deposits, efflorescence, rubbish and surplus materials.
4. Cleaning materials and methods: As recommended by manufacturers of products being cleaned, and must not damage or disfigure other materials or construction.
5. COSHH dated data sheets: Obtain for all materials used for cleaning and ensure they are used only as recommended by their manufacturers.
6. 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.
7. 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

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

730 Making good defects

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

Ω End of Section

A34
Security/ safety/ protection UNCHANGED

Security, health and safety

120A Execution hazards

1. Common hazards: Not listed. Control by good management and site practice.
2. Significant hazards: Refer to Pre-Construction Information Pack

130A Product hazards

1. Hazardous substances: Workplace Exposure Limits.
2. Common hazards: Not listed. Control by good management and site practice.
3. Significant hazards: Refer to Pre-Construction Information Pack.

140 Construction phase health and safety plan

1. Submission: Present to the employer/ client no later than one week before commencement.
2. 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.
3. 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

1. Protection: Safeguard the site, the Works, products, materials, and any existing buildings affected by the Works from damage and theft.
2. Access: Take all reasonable precautions to prevent unauthorized access to the site, the Works and adjoining property.
3. Special requirements: None

160 Stability

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

170 Occupied premises

1. Extent: Existing buildings will be occupied and/ or used during the contract as follows: .
    1.1. Services will be held in the Church throughout the Contract. Dates and times of these will be advised at the Pre-Start Meeting. Works will not be required to stop for the services but if breaks can accommodate the services it would be appreciated.-
    1.2. Funerals may be scheduled when the works are ongoing. A minimum 24hrs notice will be given to the Contractor. Works will be expected to cease for the funeral
2. Works: Carry out without undue inconvenience and nuisance and without danger to occupants and users.

3. 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.

190A Occupier's rules and regulations

1. No alcohol, no foul language, no blasphemous language, no radios, no drugs, appropriate PPE to be worn at all times.

210 Safety provisions for site visits

1. Safety: Submit details in advance of safety provisions and procedures (including those relating to materials, which may be deleterious), which will require their compliance when visiting the site.
2. Protective clothing and/ or equipment: Provide and maintain on site for visitors to the site.

Protect against the following

330 Noise and vibration

1. Standard: Comply with the recommendations of BS 5228-1, in particular clause 7.3, to minimize noise levels during the execution of the Works.
2. Noise levels from the Works: Maximum level: 80 dB(A) when measured from Hitchin Road dB(A) when measured from .....
3. Equipment: Fit compressors, percussion tools and vehicles with effective silencers of a type recommended by manufacturers of the compressors, tools or vehicles.
4. Restrictions: Do not use:
   4.1. Percussion tools and other noisy appliances without consent during the hours of 5pm to 8am.
   4.2. Radios or other audio equipment or permit employees to use in ways or at times that may cause nuisance.

340 Pollution

1. Prevention: Protect the site, the Works and the general environment including the atmosphere, land, streams and waterways against pollution.
2. Contamination: If pollution occurs inform immediately, including to the appropriate Authorities and provide relevant information.

350 Pesticides

1. Use: Not permitted.

360 Nuisance

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

370 Asbestos containing materials

1. Duty: Report immediately any suspected materials discovered during execution of the Works.
   1.1. Do not disturb.
   1.2. Agree methods for safe removal or encapsulation.

371 Dangerous or hazardous substances

1. Duty: Report immediately suspected materials discovered during execution of the Works.
   1.1. Do not disturb.
   1.2. Agree methods for safe removal or remediation.

375 Antiquities

1. Duty: Report immediately any fossils, antiquities and other objects of interest or value discovered during execution of the Works.
2. Preservation: Keep objects in the exact position and condition in which they were found.
3. Special requirements: Inform CA and Archaeologist

380 Fire prevention

1. Duty: Prevent personal injury or death, and damage to the Works or other property from fire.
2. 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').

380A Fire prevention

1. Duty: Prevent personal injury or death, and damage to the Works or other property from fire.
2. 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').
3. Completion of Ecclesiastical's Hot Works Permit is required for all Hot Works on site.
4. Where practicable all lead welding to be completed away from the structure (i.e. on the scaffolding or on the ground).

390 Smoking on-site

1. Smoking on site: Not permitted.

400 Burning on-site

1. Burning on site: Not permitted.

410 Moisture

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

420 Infected timber/ Contaminated materials

1. Removal: Where instructed to remove material affected by fungal/ insect attack from the building, minimize the risk of infecting other parts of the building.
2. 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

1. Includes: Rubbish, debris, spoil, surplus material, containers and packaging.
2. General: Minimize production. Prevent accumulations. Keep the site and Works clean and tidy.
3. Handling: Collect and store in suitable containers. Remove frequently and dispose of off-site in a safe and competent manner:
    3.1. Non-hazardous material: In a manner approved by the Waste Regulation Authority.
    3.2. Hazardous material: As directed by the Waste Regulation Authority and in accordance with relevant regulations.
4. Recyclable material: Sort and dispose at a Materials Recycling Facility approved by the Waste Regulation Authority.
5. Voids and cavities in the construction: Remove rubbish, dirt and residues before closing in.
6. Waste transfer documentation: Retain on site.

470 Invasive species

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

Protect the following

510 Existing services

1. Confirmation: Notify all service authorities, statutory undertakers and/ or adjacent owners of proposed works not less than one week before commencing site operations.
2. 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.
3. Work adjacent to services
    3.1. Comply with service authority's/ statutory undertaker's recommendations.
    3.2. Adequately protect, and prevent damage to services: Do not interfere with their operation without consent of service authorities/ statutory undertakers or other owners.
4. Identifying services
    4.1. Below ground: Use signboards, giving type and depth;
    4.2. Overhead: Use headroom markers.
5. Damage to services: If any results from execution of the Works:
    5.1. Immediately give notice and notify appropriate service authority/ statutory undertaker.
    5.2. Make arrangements for the work to be made good without delay to the satisfaction of service authority/ statutory undertaker or other owner as appropriate.
    5.3. Any measures taken to deal with an emergency will not affect the extent of the Contractor's liability.
6. Marker tapes or protective covers: Replace, if disturbed during site operations, to service authority's/ statutory undertakers recommendations.

520 Roads and footpaths

1. Duty: Maintain roads and footpaths within and adjacent to the site and keep clear of mud and debris.
2. 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

1. 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.
2. Protection: Before starting work submit proposals for protective measures.

540 Retained trees/ shrubs/ grassed areas

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

550 Retained trees

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

555 Wildlife species and habitats

1. General: Safeguard the following: Bats - refer to Bat Survey information.
2. Protected habitats and species: Upon discovery immediately advise. Do not proceed until instruction is received.
3. Education: Ensure employees and visitors to the site receive suitable instruction and awareness training.

560 Existing features

1. 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.
2. Special requirements: - Organ to be protected for the duration of the works with heavy gauge polythene- Access routes over masonry block (i.e. parapet features) to be protected with Cordex / Plywood to prevent damage to masonry detailing.- Internally Dust sheets to be provided to cover all pews within the Nave, Aisles and Chancel. PCC will cover / uncover as necessary to account for services

570 Existing work

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

575 Schedule of condition

1. On the date of possession contractor to take a full schedule of condition of the following areas
2. Church Hall areas used for welfare facilities.
3. Churchyard immediately around the Church and access routes into the Churchyard.
4. Church elevations as existing.
5. Church windows.
6. Areas of the Churchyard used for site facilities / storage etc.

580 Building interiors

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

640 Materials for recycling/ reuse

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

Ω End of Section

A35
Specific limitations on method/ sequence/ timing UNCHANGED

Clauses

130 Method/ sequence of work

1. Specific Limitations: Include the following in the programme:
   1.1. Bats: Presence of Bats within the work area may limit the window of working to September to April
   1.2. Lime Mortars etc: Contractor to allow for additional protection to lime renders and mortars if winter working is required

170 Working Hours

1. Specific limitations: Monday to Friday 8am to 6pm

Ω End of Section

A36
Facilities/ temporary work/ services UNCHANGED

Generally

110 Spoil heaps, temporary works and services

1. Location: Give notice and details of intended siting.
2. Maintenance: Alter, adapt and move as necessary. Remove when no longer required and make good.

Accommodation

230 Temporary accommodation

1. Facilities: Sanitary accommodation will be provided for the duration of the Contract as follows:
    1.1. Existing Facilities: Existing facilities within the Church Hall may be used. Subject to regular cleaning by the Contractor.
    1.2. Cleaning Facilities : Additional cleaning facilities to be provided to ensure suitable and adequate handwashing facilities to reduce potential Covid-19 transmission. Contractor to allow for additional cleaning and PPE as required to comply with current Covid-19 (or similar).

Temporary works

310 Roads

1. Permanent roads, hard standings and footpaths on the site: The following may be used, subject to clause A34/520:
    1.1. Details: as existing footpaths, all are tarmacadam
    1.2. Restrictions on use: limit heavy loads as construction is assumed to be for light foot traffic only
    1.3. Protective or remedial measures: none

Services and facilities

420 Lighting and power

1. Supply: Electricity from the existing mains may be used for the Works as follows:
    1.1. Metering: Free of charge
    1.2. Point of supply: TBA
    1.3. Available capacity: TBA
    1.4. Frequency: 50 Hz.
    1.5. Phase: TBA
    1.6. Current: Alternating.
2. Continuity: No responsibility will be accepted for the consequences of failure or restriction in supply.

430 Water

1. Supply: The existing mains may be used for the Works as follows:
    1.1. Metering: Free of charge

1.2. Source: TBA

1.3. Location of supply point: TBA

1.4. Conditions/ Restrictions: TBA

2. Continuity: No responsibility will be accepted for the consequences of failure or restriction in supply.

Ω End of Section

A37
Operation/ maintenance of the finished works UNCHANGED

Generally

115 The Health and Safety File

1. Responsibility: the contractor
2. Content: Obtain and provide the following information: Product Details, Maintenance Schedules, Guarantees, Warranties, Test Certificates, Reports.
3. Format: Electronic and Hard Copy (A4)
4. Delivery to: Client and Contract Administrator (electronic only) By (date): 4 weeks following Practical Completion By (date): .....

Ω End of Section

A54
Provisional work/ items UNCHANGED

Clauses

110 Provisional sums for defined work

1. Item: Signboard
2. Description of work: Provision of signboard - location to be confirmed - but outlining key stakeholders and funders.
3. Provisional Sums: Include £500.
4. Allow for general attendance.

210 Provisional sums for undefined work

1. Item: Timber Boarding Repairs to Roofs
2. Description of work: Replacement timber boards to the main roof slopes (over and above the 10% specified within the specification document)
3. Provisional Sums: Include £2,000.
4. Allow for general attendance.

210A Provisional sums for undefined work

1. Item: Masonry Repairs
2. Description of work: Additional Masonry / Render Repairs around the Chancel or Clerestory Wall to the North Aisle
3. Provisional Sums: Include £3,000.
4. Allow for general attendance.

590 Contingencies

1. Provisional sum: Include: £20,000.

Ω End of Section

Section 2: Preambles

C20
Demolition UNCHANGED

Clauses

2 To be read with preliminaries/ general conditions

General requirements

140 Bench marks

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

150 Features to be retained

1. General: Keep in place and protect the following: Refer to scope of works for detailed requirements.

Services affected by deconstruction/ demolition

210 Services regulations

1. Work carried out to or affecting new and/ or existing services: Carry out in accordance with the byelaws and/ or regulations of the relevant Statutory Authority.

220 Location of services

1. Services affected by deconstruction/ demolition work: Locate and mark positions.
2. Mains services marking: Arrange with the appropriate authorities for services to be located and marked.
    2.1. Marking standard: In accordance with National Joint Utilities Group 'Guidelines on the positioning and colour coding of underground utilities' apparatus'.

270 Services to be retained

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

Deconstruction/ demolition work

310 Workmanship

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

320 Gas or vapour risks

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

330 Dust control

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

340 Health hazards

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

360 Structures to be retained

1. Extent: As noted in scope of works and drawings
2. Parts which are to be kept in place: Protect.
3. Interface between retained structures and deconstruction/ demolition: Cut away and strip out with care to minimize making good.

370 Partly demolished structures

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

380 Dangerous openings

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

391 Asbestos-containing materials – unknown occurrences

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

410 Unforeseen hazards

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

Materials arising

510 Contractor's property

1. Components and materials arising from the deconstruction/ demolition work: Property of the Contractor except where otherwise provided.

2. Action: Remove from site as work proceeds where not to be reused or recycled for site use.

511 Employer's property

1. Components and materials to remain the property of the Employer: As noted in scope of works
2. Protection: Maintain until these items are removed by the Employer or reused in the Works, or until the end of the Contract.
3. Special requirements: As noted in scope of works

520 Recycled materials

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

Ω End of Section

C41
Repairing/ renovating/ conserving masonry UNCHANGED

Clauses

2 To be read with preliminaries/ general conditions

Generally/ preparation

110 Scope of work

1. Schedule: As scope of works
2. Records of masonry to be repaired: Before starting work, use measurements and photographs as appropriate to record bonding patterns, joint widths, special features, etc.
3. Identification of masonry units to be removed, replaced or repaired: Mark clearly, but not indelibly, on face of masonry units or parts of units to be cut out and replaced. Transcribe markings to drawings/ photographs.

120 Site inspection

1. Purpose: To confirm type and extent of repair/ renovation/ conservation work shown on drawings and described in survey reports and schedules of work.
2. Parties involved: - Contract administrator;- Contractor's representative; and- Foreman mason
3. Timing: At least two working days before starting each section of work.
4. Instructions issued during inspection: To be confirmed by Contract Administrator

125 Removal of fittings/ fixtures

1. Items to be removed, and reinstated on completion of repair work: As scope of works
    1.1. Identification: Attach labels or otherwise mark items using durable, non-permanent means, to identify location and describe refixing instructions, where applicable.
    1.2. Treatment following removal: Refer to schedule
    1.3. Storage: Protect against damage, and store until required.
        1.3.1. Storage location: On site, submit proposals
    1.4. Reinstatement: Refit in original locations using original installation methods.
2. Items unsuitable or not required for reuse: To be agreed with Contract Administrator
    2.1. Disposal: Submit proposals
3. Masonry fabric and surfaces: Do not damage during removal and replacement of fittings/ fixtures.

130 Removal of plant growths from masonry

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

140 Record of work

1. General: Record work carried out to masonry clearly and accurately using written descriptions, sketches, drawings and photographs, as necessary.
2. Specific records: To be completed by Archaeologist
3. Documentation: Submit on completion of the work.
   3.1. Number of sets: One

Workmanship generally

150 Power tools

1. Usage for removal of mortar: Not permitted

160 Protection of masonry units and masonry

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

165 Structural stability

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

170 Disturbance to retained masonry

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

180 Workmanship

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

185 Adverse weather

1. General: Do not use frozen materials or lay masonry units on frozen surfaces.
2. Air temperature: Do not bed masonry units or repoint:
   2.1. In cement gauged mortars when ambient air temperature is at or below 3°C and falling or unless it is at least 1°C and rising, unless mortar has a minimum temperature of 4°C when laid and the masonry is adequately protected.
   2.2. In hydraulic lime:sand mortars when ambient air temperature is at or below 5°C and falling or unless it is at least 3°C and rising.
   2.3. In nonhydraulic lime:sand mortars in cold weather, unless approval is given.

3. Temperature of the work: Maintain above freezing until mortar has fully set.
4. Rain, snow and dew: Protect masonry by covering during precipitation, and at all times when work is not proceeding.
5. Hot conditions and drying winds: Prevent masonry from drying out rapidly.
6. New mortar damaged by frost: Rake out and replace.

190 Control samples

1. General: Complete an area of each of the following types of work, and arrange for inspection before proceeding with the remainder: As scope of works.

Material/ production/ accessories

215 Material samples

1. Representative samples of designated materials: Submit before placing orders.
   1.1. Designated materials: As scope of works
2. Retention of samples: Unless instructed otherwise, retain samples on site for reference. Protect from damage and contamination.

220 Recording profiles

1. Profiles: Take measurements from existing masonry units, as instructed, to allow accurate matching of replacements.
2. Recording in situ: If there are no suitable joints to allow use of inserts, seek instructions.
3. Drawings and templates: Prepare as necessary. Templates must be clearly and indelibly marked to identify use and location.

230 Inspection of drawings, templates, casts, etc.

1. Timing: Before starting production of masonry units associated with the following items: As scope of works.
2. Period of notice (minimum): One week

240 Stone

1. Supplier: To Approval
2. Type: Clipsham
3. Quality: Free from vents, cracks, fissures, discolouration, or other defects that may adversely affect strength, durability or appearance. Thoroughly seasoned, dressed and worked in accordance with shop drawings prepared by the supplier.
4. Finish: To match existing

245 Replacement stone units

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

250 Stone orientation

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

255 Ashlar blocks/ Dressings

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

258 Existing templates

1. General: Templates for replacement stones are available for making copy templates.

281 Fixings

1. Description:
2. Type: Submit proposals.
3. Material: Austenitic stainless steel
4. Size, strength and number: As necessary to resist loads likely to occur during the life of the building, and to prevent lateral displacement or pulling apart of the construction.

285 Bed joint reinforcement to masonry

1. Description: As noted in scope of works
2. Manufacturer: Submit proposals
   2.1. Product reference: Submit Proposals
3. Material: Austenitic stainless steel
4. Width: Approximately 40-50 mm less in width than wall or leaf.
5. Laying: On an even bed of mortar in a continuous strip with
6. 225 mm laps at joints and full laps at angles. Keep back
7. 20 mm from face of external work, 12 mm back from face of internal work and finish mortar joint to normal thickness.

Dismantling/ rebuilding

310 Dismantling masonry for reuse

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

320A Rebuilding

1. Description:

2. Rebuilding: To match previous face and joint lines, joint widths and bonding. Adequately bonded to retained work/ backing masonry, as appropriate.
3. Joint surfaces: Dampen, as necessary, to control suction.
4. Laying masonry units: On a full bed of mortar; perpend joints filled.
5. Exposed faces: Remove mortar and grout splashes immediately.

Replacements and insertions

330 Preparation for replacement masonry

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

385 Laying replacement masonry units

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

390 Grouting joints

1. Grout mix: As schedule of work
2. Joints that cannot be fully filled with bedding mortar: Grout thoroughly around replacement masonry units.
3. Grouting: Keep grout back from exposed face to allow for the depth of pointing, using an approved temporary sealing material. Prevent grout staining exposed face.

395 Installing stone inserts

1. Pockets to receive inserts
    1.1. Cut out accurately. Undercut sides of pocket where necessary to provide space for bonding material.
    1.2. Adjust depth so that insert stands proud of existing stone for finishing in situ.
    1.3. Clean out thoroughly.
2. Inserts: Cut to the smallest rectangular shape necessary to replace the defective area and provide a firm seating. Install accurately and securely.
    2.1. Exposed faces: Keep clear of bonding material.
3. Existing joint widths: Maintain. Do not bridge joints.

405 Bonded dowels

1. Description:

2. Dowels: Austenitic stainless steel - 10mm
3. Adhesive: Hilti Resin HIT HY270
4. Holes for dowels: Suitably sized and accurately aligned in masonry background and in rear of replacement/ insert stone; clean and dry.
5. Other requirements: Do not use adhesive to bond stones at joints unless instructed.

410 Corroded metal fixings

1. Removal: Cut out carefully, causing the least possible disturbance to surrounding masonry. Remove associated rust debris.
2. Replacement: Compatible fixings as clause: TBA

420 Temporary distance pieces for joints in ashlar stonework

1. Material: Lead or stainless steel.
2. Removal: When mortar/ grout is sufficiently strong to take loading without compression.

Tooling/ dressing stone in situ

450 Weathering ledges at joints

1. Locations: Where stones project or are recessed.
2. Requirement: Carefully weather the ledge, to approval.
3. Method: Suitably graded carborundum blocks or tooling as appropriate.

455 Descaling stone

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

458 Redressing stone

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

Mortar repairs

510 Preparation for mortar repairs

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

515 Reinforcement for mortar repairs

1. Material: Austenitic stainless steel, phosphor bronze or copper alloy wire, 3 mm diameter.
2. Armatures: Form to suit profiles of mortar repair and provide effective reinforcement.

3. Cover to reinforcement: Not less than 18 mm.
4. Installation: Drill holes into background to receive reinforcement, and bond firmly with a suitable epoxy resin.

540 Applying mortar

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

Crack repairs/ ties/ reinforcement - Not Used

Grouting rubble filled cores

710 Preparation for grouting

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

712 Flushing out

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

740 Application of grouting

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

Pointing/ repointing

810 Preparation for repointing

1. Existing mortar: Working from top of wall downwards, remove mortar carefully, without damaging adjacent masonry or widening joints, to a minimum depth of twice joint thickness .
    1.1. Loose or friable mortar: Seek instructions when mortar beyond specified recess depth is loose or friable and/ or if cavities are found.

2. Raked joints: Remove dust and debris.

820 Pointing

1. Description: Stonework generally
2. Preparation of joints: Carefully brush away loose mortar and Dampen joints, as necessary, to control suction
3. Mortar: As section Z21.
   3.1. Mix: 1:3 NHL 3.5 Hydraulic lime : Sand
   3.2. Sand source/ type: As scope of works
4. Joints profile/ finish: As scope of works
5. Other requirements: As scope of works

840 Pointing with tools/ Irons

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

860A Tamped finish to joints

1. Timing: After initial mortar set has taken place remove laitance and excess fines by tamping with a churn brush, to give a coarse texture. Do not compact mortar.

Ω End of Section

C51
Repairing/ renovating/ conserving timber UNCHANGED

Clauses

2 To be read with preliminaries/ general conditions

General

110 Inspection

1. Purpose: To confirm nature and extent of repair/ renovation/ conservation work shown on drawings and described in survey reports and schedules of work.
2. Parties involved: - Contract administrator;- Contractor's representative; and- Foreman carpenter
3. Timing: At least 2 days before starting works
4. Instructions issued during inspection: To be confirmed by Contract Administrator

130 Opening up

1. Purpose: To reveal previously concealed areas of structure or fabric not recorded during initial surveys.
2. Extent: To be agreed
3. Timing: Give notice before starting opening up.
   3.1. Period of notice: At least 24 hours
4. Retained building structure/ fabric: Do not damage or destabilize.

150 Timber procurement

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

Structural repairs/ alterations - Not Used

Products - Not Used

Execution

600 Workmanship

1. Skill and experience of site operatives: Appropriate for types of work on which they are employed.

1.1. Documentary evidence: Submit on request.

610 Temporary supports/ propping

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

620 Protection of timber and wood components before and during installation

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

650 Dimensions generally

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

680 Warping of timber

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

690 Processing treated timber

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

750 Cleaning dirty or stained wood

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

760 Repair of members – cutting out members

1. Extent of timber removal: Cut out full cross section of member where wood is defective or decayed, plus 200 mm of sound wood.
2. Distance from face of support to cut end of existing timber: Obtain instructions if dimension exceeds 500 mm.
3. Joint profile: TBA

770 Repair of compression members – piecing in

1. Defective wood: Remove only decayed or defective wood. Finish cut-outs to clean, regular profiles.
2. Timber inserts: Cut accurately to fit. Glue and pin in place. Lie of grain to match as closely as possible that of parent timber.
3. Joint profile: TBA

780 Repair of distorted timber members

1. Generally: Repair to shape that member has assumed.

790 Pegs for mortise and tenon joints in structural timber

1. Wood species: Oak.
2. Condition: Dry, preferably oven 'baked' before use.
3. Shape: Round and tapered.
4. Second hand pegs: Do not use.
5. Peg holes: Slightly offset such that when pegs are driven home, sections being joined are pulled together.

800 Condition of dowels to be bonded into timber

1. Condition at time of installation
   1.1. Dowels generally: Free from corrosive pitting, loose mill scale, loose rust and contaminants that may adversely affect dowels, adhesive, or bond between the two.
   1.2. Carbon steel dowels: As above, and free from corrosive pitting, loose mill scale and loose rust.

820 Making connectored joints

1. Connector location: Where not shown otherwise, spacings, end and edge distances to be not less than Standard values to BS 5268-2, Section 6.
2. Bolt hole: As close as practical to nominal diameter of bolt, and not more than 2 mm greater.
3. Centres of bolt holes: Not more than 2 mm from positions shown on drawings.
4. Assembly: Do not crush timber, deform washers or overstress bolts.

860 Moisture content checking

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

Completion

910 Mechanically fastened joints

1. General: Inspect accessible bolted, coach screwed and timber pegged joints and tighten fasteners if necessary.
   1.1. Timing: On Completion and at end of Defects Liability Period or Rectification Period.

920 Dating timbers used in structural repairs

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

Ω End of Section

H71
Lead sheet coverings/ flashings REVISED

Clauses

2 To be read with preliminaries/ general conditions.

Types of leadwork - Not Used

General requirements/ preparatory work

510 Workmanship generally

1. Standard: To BS 6915 and latest edition of 'Rolled lead sheet. The complete manual' published by the Lead Sheet Association.
2. Fabrication and fixing: To provide a secure, free draining and completely weathertight installation.
3. Operatives: Trained in the application of lead coverings/ flashings. Submit records of experience on request.
4. Preforming: Measure, mark, cut and form lead prior to assembly wherever possible.
5. Marking out: With pencil, chalk or crayon. Do not use scribers or other sharp instruments without approval.
6. Bossing and forming: Straight and regular bends, leaving sheets free from ripples, kinks, buckling and cracks.
7. Solder: Use only where specified.
8. Sharp metal edges: Fold under or remove as work proceeds.
9. Finished work: Fully supported, adequately fixed to resist wind uplift but also able to accommodate thermal movement without distortion or stress.
    9.1. Protection: Prevent staining, discolouration and damage by subsequent works.

516A Leadwelding

1. In situ welding: Is: **NOT** permitted. On-site lead welding is permitted in the scaffolding bay and subject to completion of a 'hot work permit' form and compliance with its requirements.

520A Lead sheet

1. Production method:
    1.1. Sand cast, from lead free from bitumen, solder, other impurities, inclusions, laminations, cracks, air, pinholes and blowholes; to code thicknesses but with a tolerance (by weight) of ±10%.
2. Identification: Labelled to show thickness/ code, weight and type.

580 Existing metal reused REVISED

1. Type/ Location/ Extent: All lead to Nave to be recast
2. Handling/ Storage: Keep for reuse in the Works.

610 Suitability of substrates

1. Condition: Dry and free of dust, debris, grease and other deleterious matter.

620 Preparation of existing timber substrates

1. Remedial work: Adjust boards to level and securely fix. Punch in protruding fasteners and plane or sand to achieve an even surface.
2. Defective boards: Give notice.
3. Moisture content: Not more than 22% at time of covering. Give notice if greater than 16%.

640 Timber for use with leadwork

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

650 Laying underlay

1. Handling: Prevent tears and punctures.
2. Laying: Butt or overlap jointed onto a dry substrate.
    2.1. Fixing edges: With copper or stainless steel staples or clout nails.
    2.2. Do not lay over roof edges but do turn up at abutments.
3. Wood core rolls: Fixed over underlay.
4. Protection: Keep dry and cover with lead at the earliest opportunity.

Fixing lead

705 Head fixing lead sheet

1. Top edge: Secured with two rows of fixings, 25 mm and 50 mm from top edge of sheet, at 75 mm centres in each row, evenly spaced and staggered.
2. Sheets less than 500 mm deep: May be secured with one row of fixings, 25 mm from top edge of sheet and evenly spaced at 50 mm centres.

710 Fixings

1. Nails to timber substrates: Copper clout nails to BS 1202-2, or stainless steel (austenitic) clout nails to BS 1202-1.
    1.1. Shank type: Annular ringed, helical threaded or serrated.
    1.2. Shank diameter: Not less than 2.65 mm for light duty or 3.35 mm for heavy duty.
    1.3. Length: Not less than 20 mm or equal to substrate thickness.
2. Screws to concrete or masonry substrates: Brass or stainless steel to BS 1210, tables 3 or 4.
    2.1. Diameter: Not less than 3.35 mm.
    2.2. Length: Not less than 19 mm.
    2.3. Washers and plastic plugs: Compatible with screws and lead.
3. Screws to composite metal decks: Self tapping as recommended by the deck and lead manufacturer/ supplier for clips.

715 Clips

1. Manufacturer: Contractor's choice

2. Material:
   2.1. Lead clips: Cut from sheets of same thickness/ code as sheet being secured.
   2.2. Copper clips:
      2.2.1. Thickness: 0.70 mm
      2.2.2. Temper: BS EN 1172, designation R220 in welts, seams and rolls, R240 elsewhere; dipped in solder if exposed to view.
   2.3. Stainless steel clips:
      2.3.1. Thickness: 0.46 mm
      2.3.2. Grade: BS EN 10088, 1.4301(304) terne coated if exposed to view.
3. Dimensions:
   3.1. Width: 50 mm where not continuous.
   3.2. Length: To suit detail.
4. Fixing clips: Secure each to substrate with either two screw or three nail fixings not more than 50 mm from edge of lead sheet. Use additional fixings where lead downstands exceed 75 mm.
5. Fixing lead sheet: Welt clips around edges and turn over 25 mm.

760 Continuous clips

1. Material:
   1.1. Lead continuous clips:
      1.1.1. Thickness: Not to be used
   1.2. Copper continuous clips:
      1.2.1. Thickness: 0.70 mm
      1.2.2. Temper: BS EN 1172, designation R220 in welts, seams and rolls, R240 elsewhere.
   1.3. Stainless steel continuous clips:
      1.3.1. Thickness: 0.46 mm
      1.3.2. Grade: BS EN 10088, 1.4301(304).
2. Dimensions:
   2.1. Width: To suit detail.
3. Fixing clips: Secure at: 300mm centres
4. Fixing lead sheet: Welt edge around continuous clip and dress down.

770 Wedge fixing into joints/ chases

1. Joint/ chase: Rake out to a depth of not less than 25 mm.
2. Lead: Dress into joint/ chase.
   2.1. Fixing: Lead wedges at not more than 450 mm centres, at every change of direction and with at least two for each piece of lead.
3. Sealant: 1:3 Mortar - NHL 3.5 : sand
   3.1. Application: As section Z22.

790 Screw fixing into joints/ chases

1. Joint/ chase: Rake out to a depth of not less than 25 mm.
2. Lead: Dress into joint/ chase and up back face.
   2.1. Fixing: Into back face with stainless steel screws and washers and plastics plugs at not more than 450 mm centres, at every change of direction, and with at least two fixings for each piece of lead.
3. Sealant: Submit proposals
   3.1. Application: As section Z22.

Jointing lead

810 Forming details

1. Method: Bossing or leadwelding except where bossing is specifically required.
2. Leadwelded seams: Neatly and consistently formed.
   2.1. Seams: Do not undercut or reduce sheet thickness.
   2.2. Filler strips: Of the same composition as the sheets being joined.
   2.3. Butt joints: Formed to a thickness one third more than the sheets being joined.
   2.4. Lap joints: Formed with 25 mm laps and two loadings to the edge of the overlap.
3. Bossing: Carried out without thinning, cutting or otherwise splitting the lead sheet.
   3.1. Details where bossing must be used: As noted in LSA report

845 Wood cored roll joints with splash lap ADDED

1. Wood core:
   1.1. Size: 45 x 45 mm round tapering to a flat base 25 mm wide.
   1.2. Fixing to substrate: Brass or stainless steel countersunk screws at not more than 300 mm centres.
2. Undercloak: Dress three quarters around core.
   2.1. Fixing: Nail to core at 150 mm centres for one third length of the sheet starting from the head.
3. Overcloak: Dress around core and extend on to main surface to form a 40 mm splash lap.

847 Hollow roll joints

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

865 Drips without splash laps

1. Underlap: Dress into rebate along top edge of drip.
   1.1. Fixing: One row of nails at 50 mm centres on centre line of rebate.
2. Overlap: Dress over drip to just short of lower level.

880 Welted joints

1. Joint allowance: 50 mm overlap and 25 mm underlap.
2. Copper or stainless steel clips: Fix to substrate at not more than 450 mm centres.

3. Overlap: Welt around underlap and clips and lightly dress down.

Deleted clauses

830 Standing seam joints DELETED

Ω End of Section

M20
Plastered/ rendered/ roughcast coatings UNCHANGED

Clauses

2 To be read with preliminaries/ general conditions.

Types of coating - Not Used

Materials and making of mortar

478 Hydraulic lime

1. Standard: To BS EN 459-1.
    1.1. Type: Natural hydraulic lime (NHL).

495 Mixing

1. Render mortars (site-made):
    1.1. Batching: By volume. Use clean and accurate gauge boxes or buckets.
    1.2. Mix proportions: Based on damp sand. Adjust for dry sand.
    1.3. Lime:sand: Mix thoroughly. Allow to stand, without drying out, for at least 16 hours before using.
2. Mixes: Of uniform consistence and free from lumps. Do not retemper or reconstitute mixes.
3. Contamination: Prevent intermixing with other materials.

497 Cold weather

1. General: Do not use frozen materials or apply coatings on frozen or frost bound substrates.
2. External work: Avoid when air temperature is at or below 5°C and falling or below 3°C and rising. Maintain temperature of work above freezing until coatings have fully hardened.
3. Internal work: Take precautions to enable internal coating work to proceed without damage when air temperature is below 3°C.

General - Not Used

Materials and marking of mortar - Not Used

Preparing substrates

510 Suitability of substrates

1. Soundness: Free from loose areas and significant cracks and gaps.
2. Cutting, chasing, making good, fixing of conduits and services outlets and the like: Completed.
3. Tolerances: Permitting specified flatness/ regularity of finished coatings.
4. Cleanliness: Free from dirt, dust, efflorescence and mould, and other contaminants incompatible with coatings.

556 Removing defective existing render

1. Render for removal: Detached, hollow, soft, friable, badly cracked, affected by efflorescence or otherwise damaged.
2. Removing defective render: Cut out to regular rectangular areas with straight edges.
    2.1. Horizontal and vertical edges: Square cut or slightly undercut.
    2.2. Bottom edges to external render: Do not undercut.
    2.3. Render with imitation joints: Cut back to joint lines.
3. Cracks:
    3.1. Fine hairline cracking/ crazing: Leave.
    3.2. Other cracks: Obtain instructions
4. Dust and loose material: Remove from exposed substrates and edges.

568 Existing damp affected plaster/ render

1. 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.
2. Perished and salt contaminated masonry:
    2.1. Mortar joints: Rake out.
    2.2. Masonry units: Submit proposals.
3. Faults in substrate (structural deficiencies, additional sources of damp, etc.): Submit proposals.
4. Drying out substrate: Established drying conditions. Leave walls to dry for as long as possible before plastering.
5. Dust and loose material: Remove from exposed substrate and edges.

Backings/ beads/ joints

636 Beads/ stops for external use

1. Material: Stainless steel to BS EN 10088-1, grade 1.4301

640 Beads/ stops generally

1. Location: External angles and stop ends, except where specified otherwise.
2. Corners: Neat mitres at return angles.
3. Fixing: Secure, using longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with substrate.
    3.1. Beads/ stops for external render: Fix mechanically.
4. Finishing: After coatings have been applied remove surplus material, while still wet, from surfaces of beads/ stops exposed to view.

Mouldings/ decorative plasterwork - Not Used

Internal plastering - Not Used

External rendering

810 Application generally

1. Application of coatings: Firmly and in one continuous operation between angles and joints. Achieve good adhesion.
2. Appearance of finished surfaces: Even and consistent. Free from rippling, hollows, ridges, cracks and crazing.
   2.1. Accuracy: Finish to a true plane, to correct line and level, with angles and corners to a right angle unless specified otherwise, and with walls and reveals plumb and square.
3. Drying: Prevent excessively rapid or localized drying out.

820 Dubbing out for rendering

1. General: Correct substrate inaccuracies.
2. Thickness of any one coat (maximum): 16 mm.
   2.1. Total thickness (maximum): 20 mm, otherwise obtain instructions.
3. Mix: As undercoat.
4. Application: Achieve firm bond. Allow each coat to set sufficiently before the next is applied. Comb surface of each coat.

840 Undercoats generally

1. General: Rule to an even surface. Comb to provide a key for the next coat. Do not penetrate the coat.
2. Undercoats on metal lathing: Work well into interstices to obtain maximum key.

856 Final coat - plain floated finish

1. Finish: Even, open texture free from laitance.

880 Curing and drying

1. General: Prevent premature setting and uneven drying of each coat.
2. Curing coatings: Keep each coat damp by covering with polyethylene sheet and/ or spraying with water.
   2.1. Curing period (minimum): As hydraulic lime manufacturer's recommendations
   2.2. Final coat: Hang sheeting clear of the final coat.
3. Drying: Allow each coat to dry thoroughly, with drying shrinkage substantially complete before applying next coat.
4. Protection: Protect from frost and rain.

Ω End of Section

Z10
Purpose made joinery UNCHANGED

To be read with preliminaries/ general conditions.

110 Fabrication

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

120 Cross section dimensions of timber

1. General: Dimensions on drawings are finished sizes.
2. Maximum permitted deviations from finished sizes
   2.1. Softwood sections: To BS EN 1313-1:-
      2.1.1. Clause 6 for sawn sections.
   2.2. Hardwood sections: To BS EN 1313-2:-
      2.2.1. Clause 6 for sawn sections.
      2.2.2. Clause NA.3 for further processed sections.

130 Preservative treated wood

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

140 Moisture content

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

250 Finishing

1. Surfaces: Smooth, even and suitable to receive finishes.
   1.1. Arrises: Eased unless shown otherwise on drawings.

2. End grain in external components: Sealed with primer or sealer as section M60 and allowed to dry before assembly.

Ω End of Section

Z12
Preservative/ fire retardant treatment UNCHANGED

To be read with preliminaries/ general conditions.

110A Treatment application

1. Timing: After cutting and machining timber, and before assembling components.
2. Processor: Licensed by manufacturer of specified treatment solution.
3. Certification: For each batch of timber provide a certificate of assurance that treatment has been carried out as specified.

120 Commodity specifications

1. Standard: Current edition of the Wood Protection Association (WPA) publication 'Industrial wood preservation specification and practice'.

130 Preservative treatment solution strengths/ treatment cycles

1. General: Select to achieve specified service life and to suit treatability of specified wood species.

160 Organic solvent preservative treatment

1. Solution
    1.1. Manufacturer: Contractor's choice
        1.1.1. Product reference: Contractor's choice
    1.2. Application: Double vacuum + low pressure impregnation, or immersion.
2. Moisture content of wood
    2.1. At time of treatment: As specified for the timber/ component at time of fixing.
    2.2. After treatment: Timber to be surface dry before use.

610 Making good to preservative treatment on site

1. Preservative solution: Compatible with off-site treatment.
2. Application: In accordance with preservative manufacturer's recommendations.

Ω End of Section

Z20
Fixings and adhesives UNCHANGED

Clauses

2 To be read with preliminaries/ general conditions.

Products

310 Fasteners generally

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

Execution

610 Fixing generally

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

620 Fixing through finishes

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

630 Fixing packings

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

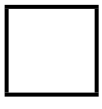
640 Fixing cramps

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

670 Pelleted countersunk screw fixing

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

Ω End of Section



Z21
Mortars UNCHANGED

Clauses

2 To be read with preliminaries/ general conditions.

Cement gauged mortars - Not Used

Lime:sand mortars

310 Lime:sand mortar mixes

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

320 Sand for lime:sand masonry mortars

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

360 Making lime:sand mortars generally

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

370 Site prepared nonhydraulic lime:sand mortars

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

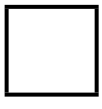
390 Knocking up nonhydraulic lime:sand mortars

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

400 Making hydraulic lime:sand mortars

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

Ω End of Section



Section 3: Scope of Works

PCC St Mary the Virgin Church
St Mary the Virgin Church
Nave & Chancel Roof Repairs

BA REF: P17-034
REVISION: Faculty Approval Issue

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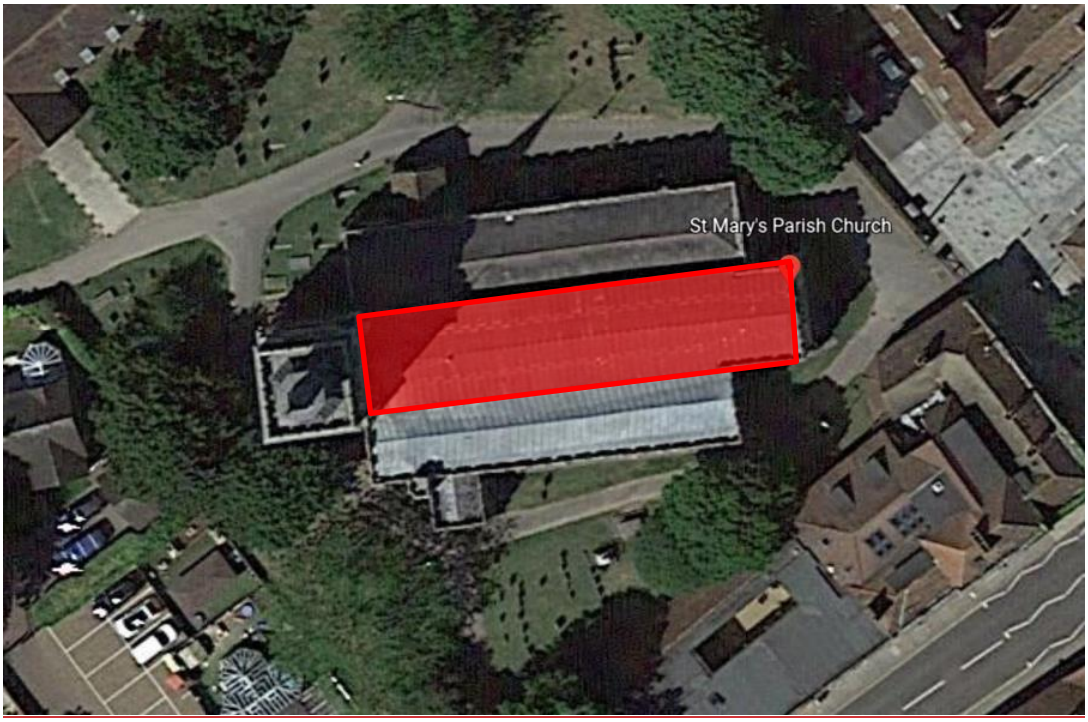
Contractor to Initial

1.0 Generally

This Schedule of Works is to be read in conjunction with all Preliminaries, Preambles, Appendices and Drawings.

The works comprise the following:

- Re-leading of the Nave and Chancel Roofs (as highlighted in red below)
- Repair and conservation of stone work to the Chancel Parapet Walls & South Porch Stair Turret~~Tower.~~
- Provision of improved access to North Aisle Roof from the Nave.



2.0 Scaffolding

A temporary freestanding scaffolding structure is to be erected around the ~~South Aisle~~Nave to allow operative access during restoration works.

Refer to Scaffolding Specification in Appendices.

Ecclesiastical Insurance's Current Scaffolding Checklist should be thoroughly reviewed and any exceptions to the requirements noted with tender returns. It is expected that all requirements will be met for this project.

Refer also to Preliminaries A30/500 with details to be submitted with tender.

3.0 Demolition

Refer to Preambles Section C20.

The general principle of the refurbishment is that historic fabric should be retained where possible. Take care not to cart away materials that could be reused in the reconstruction, particularly timber elements. Materials adjacent areas to be retained to be carefully removed to avoid undue damage.

3.1.1 Allow to clean out and vacuum all voids encountered whilst works are in progress. Allow to remove debris from site. Voids to be left clean and free of dust and debris on completion.

3.2 Leadwork

3.2.1 Carefully remove all leadwork from the Nave & Chancel Roof, including all flashings, abutment details etc. Taking care not to damage timber substrate or adjacent masonry.

3.2.2 Cut out and store date plaques for display within Church.

3.2.3 Provide MDF backing and new picture frame for the lead plaques. Styled to match lead plaques elsewhere in the Church.

4.0 Timber Work

4.1 Gutter Repairs

Only damaged or rotten boarding will be stripped and carted away.

4.1.1 For purpose of the tender allow to strip and cart away all timber to Chancel gutters, subject to remeasure on exposure of timberwork.

4.1.2 Allow to provide all new softwood treated battens, noggins and other timber supports to ensure that falls suit Code 7 lead with maximum 2.5m long bays, a minimum fall of 1:80 and minimum drip heights of 60mm. All battens and noggins to be cut from 100mm x 50mm softwood timbers. Gutter to be lined with 25mm softwood timber boards with penny gaps.

4.1.3 Fix new 25mm softwood treated timber boards to eaves to form minimum 150mm upstand to the roof.

4.2 Nave & Chancel Roof Repairs

4.2.1 Clean timberwork of all redundant nails and fixings at direction of CA.

4.2.2 Allow to replace damaged boarding as agreed with CA following stripping works. For tender purposes allow to replace 10% of the boarding with new 150mm x 25mm boarding fixed with 2no. counter sunk stainless steel screws, the length not to exceed half the depth of the timber.

New boarding to be graded softwood treated timber boards with all cut ends steeped in suitable preservative and allowed to dry prior to fixing. Fix all boards with stainless steel screws countersunk into boards. A 'penny' gap should be left between boards to match the existing.

4.2.3 Allow to securely re-fix all boards with counter sunk stainless steel screws at 400mm centres.

4.3 Alterations to Chancel Gutters & Roof

<u>Eaves Details</u>

4.3.1 Fix treated softwood timber sprockets (tender stage allow 600mm x 50mm x 50mm sprockets) to eaves at approx. 400mm centres, to provide minimum upstand of 150mm from the base of the gutter for ventilated eaves detail plus an additional 25mm ventilation gap. Top 25mm of sprocket to overhang the upstand by 25mm to accommodate ventilation detail.

4.3.2 Between the sprockets provide 2no ventilation slots in existing boarding, approximately 25mm x 400mm.

4.3.3 Board over sprockets with new 25mm softwood treated timber boards as section 4.2, Top board to be chamfered to provide neat junction with existing boarding. Boards to be fixed with countersunk stainless steel screws at 400mm centres.

4.3.4 Following lead works provide fly screen to upstand as per LSA details (Fig. 325, diagram 6). Supply and fix new 25mm softwood treated timber board to front

edge of overhanging sprocket and boarding to form min 75mm downstand. Boards to be fixed with countersunk stainless steel screws.

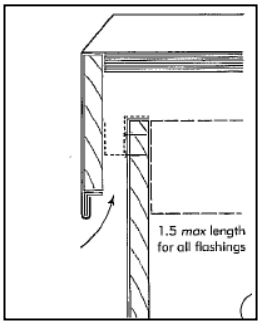
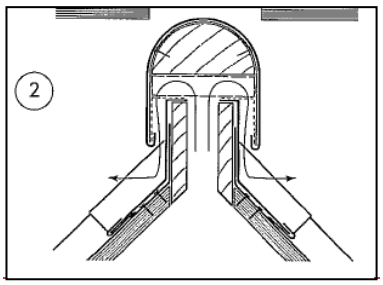


Figure 1 LSA Manual Fig. 325 diagram 6

Ridge Detail

4.3.5 Provide solid wood core ridge detail as per South Aisle Roof; to the new roof.

~~4.3.5 Form ventilated ridge detail as per Fig. 325, diagram 2 of the LSA manual. Allow to replace uppermost board with a narrower board in order to form a min. 25mm ventilation path from the roof void to the ventilated ridge. The size of the ridge will depend on the size of the existing ridge board/beam. For the purpose of the tender allow for a 150mm ridge roll.~~



~~**Figure 2 LSA Manual Fig. 325 diagram 6**~~

5.0 Leadwork

5.1.1 Provide Grade A1F building paper underlay to all substrates, laid to falls, and secured with stainless steel staples and upturned to abutments. To be laid in adjacent sheets and 100mm overlap.

5.1.2 Provide and lay code 8~~7~~ sandcast lead in accordance with LSA guidance and in accordance with Preambles Section H71 to all roof slopes and gutters.

Allow to chase out new flashings to Chancel Parapets to meet minimum upstand requirements. Flashings to be fixed with stainless steel screws and penny washers ready for lime mortar pointing.

Flashing detail to the Nave abutment to utilise existing chasing line.

Minimum upstands: 100mm min. to abutment walls and 150mm upstand to roof slopes details.

All seams to be rolled batten seams, to match South Aisle in size and profile and as per LSA guidelines, as per H71/810

5.1.3 Allow to provide hold down clips in accordance with the LSA details but allowing for 10% more clips than recommended.

5.1.4 Allow to provide new step threshold over the Nave access door to fully weatherproof this detail. No alterations to the access door are proposed.

6.0 Masonry Repairs

Refer to Preambles Sections C41, Z20 and Z21.

6.1 Samples

Stonework

Sample of stonework to be provided for approval. Clipsham cream Weatherbed limestone is the proposed stone for the works, unless otherwise stated.

Lime Mortar:

The sand shall comply with BS being clean, sharp, coarse, well graded (good distribution between sizes) and of the correct colour and texture so that the new mortar, when it dries out, matches the original colour and texture of the 'desired' mortar. The aggregate size is to match that in the 'desired' mortar as closely as possible. The desired mortar, unless otherwise indicated, is that which is still visible from the original build period and based on a lime binder.

Water shall be clean and fresh, free from organic and harmful matter.

The lime shall be NHL 3.5 from an approved source.

Mortar mix to be 1:3 lime to sand, or similar to achieve desired strength.

Render mix:

- Scratch Coat - 1:2.5 lime to sharp and soft sand
- Float Coat – 1:2.5 lime to sharp and soft sand (no stronger than scratch coat)
- Finish Coat – 1:3 lime to sharp and soft sand.

6.2 Stone Dressings & Copings

Removing

6.2.1 Carefully lift all stone copings/dressings to the Chancel parapet. Dressings are all made up in concrete and not solid stonework. If solid stonework is identified allow to retain and await confirmation of instructions from CA.

Dressings are to be removed or cut out by means of hammer and chisel. No mechanical methods to be used.

Re-bedding

6.2.2 Provide new stone dressings to the Chancel Crenellations in Clipsham. Profile to be agreed onsite but to be a match to the existing dressings (or if none are suitable due to weathering and erosion having lost the detail; South Aisle Roof coping stones may be used as a template~~Dressings to be used~~).

6.2.3 For each stone dressing, set 2no 150mm x 10mm diameter resin fixed stainless steel Helifix into existing flint walling. Corresponding holes in the stonework to be 2mm larger.

6.2.4 Bed stones on lime mortar as outlined above. Wedge and point all joints using a mixture of one part NHL 3.5 to one part stone dust to two part fine sand. and resin fix dowels. Epoxy resin fix to one end only to allow for movement. Resin to be Hilti HIT HY 270 or alternative to CA's approval. Side joints also to be filled with lime mortar.

Support stones on shims until resin/mortar has set.

6.2.5 Point joints as per re-pointing specification, see Section 7.1.

6.3 Tower Masonry

6.3.1 To 20no. masonry blocks to the South ~~Tower~~ Porch Stair Turret Quoins – refer to Photograph 1 for indicative location.

6.3.2 Cut out and renew tower quoins, patterned to match existing quoin details, allowing for complete replacement. Dowel each stone twice into the matrix, using Helifix 300mm x 6mm stainless steel dowels secured 200mm into matrix in epoxy resin, Hilti HIT HY 270 or alternative to CA's approval. Bed blocks into the pocket using lime mortar as outlined above. Wedge and point all joints using a mixture of one part NHL 3.5 to one part stone dust to two part fine sand.

6.3.3 Consolidate and make good to flintwork pointing

Photograph 1 South ~~Tower~~ Porch Stair Turret blocks to be replaced.

7.0 Rendering & Pointing

Refer to Preambles Section C41, M20, and Z21.

7.1 Samples

Where sound existing pointing and render survives in good condition, the CA will mark a section to be matched in colour, texture and strength.

Produce mortar sample blocks to satisfaction of CA.

Trial panels are to be executed for approval by the CA using the approved mortar and render sample mix. This is to confirm the workmanship and finish standard and, unless otherwise indicated, is to be retained and used as an exemplar for all subsequent pointing.

Lime and sand details as per section 6.1.

7.2 Render to Parapet Walls

7.2.1 Carefully remove render from inner and outer faces of the Chancel parapet walls; to the inside face all render to be removed, to the external face all render to be removed down to the lead flashing detail.

7.2.2 Extent of render removal is subject to review with CA on commencement and when dressed stone details to crenellations have been removed. If render is considered sound or particularly difficult to remove it may be retained.

7.2.3 To the both internal and external faces face provide new stainless steel render stop bead to lead flashing.

7.2.4 To the external face existing lead flashing detail is to be retained.

7.2.5 To the areas of removed render, allow to solidify the substrate and re-render in 3-coat lime render. Fill any large voids in the joints prior to applying the scratch coat. Flintwork should be swept down with a stiff broom and well wetted to control the suction. Apply 10mm scratch coat as per section 6.1. Cross scratch surface to provide key. Allow to cure. Mist surface prior to application of subsequent coat. Apply 10mm float coat using section 6.1. This mix should be slightly weaker than the previous. Rub with a wood flat and lightly scratch, allow to cure. Mist surface prior to application of subsequent coat. Apply 6mm finishing coat as per section 6.1. Rub up with a wood float.

Protect each coat with Hessian covers for 72 hours minimum before applying subsequent coat. Dampened hessian will protect against strong sun and will slow drying, enabling curing to take place. Longer intervals between coats are desirable and test for adhesion and strength should be carried out before applying the next coat. Works should, wherever possible, finish every day at some physical break on the building. Where this is not possible, strike off true level lines before continuing work, so that no ragged edges show on the finished work.

7.3 Repointing

All pointing works to be completed in accordance with NBS Preambles Sections C41, M20 and Z21.

Photograph 2 East End Chancel Wall repointing area

Allow to repoint all the flintwork to the east end of the chancel wall – i.e. that marked out in red in Photograph 2.

Rake out joints using hand tools to a depth of not less than twice the joint width. Care should be taken to avoid damaging surrounding masonry.

Leave a clean, square face at the back of the joint, so as to provide optimum contact with the new mortar. Clean out all debris from joints using natural bristle brush and clean water. Thoroughly wet the surface with hand-held spray. Repoint using mortar mix described above in Section 7.1. Push the mortar into the joint and firmly iron in with the maximum possible pressure and minimum of over-working. Pointing should start at the uppermost part of the wall and proceed downwards. All joints to be struck off slightly recessed. Once mortar has taken its initial set, stipple with natural bristle brush to leave the joint slightly recessed and to give the mortar a slightly textured surface to expose the aggregate. Any mortar or stains caused by the works on the face of the masonry must be completely removed, to the satisfaction of the CA, before the mortar hardens. Newly re-pointed areas should be protected with hessian to prevent rapid drying.

8.0 Rainwater Goods

8.1.1 Allow to remove all rainwater goods and fascias serving the Nave roof.

8.1.2 Allow to provide new softwood timber fascias, sized to match existing and secured with stainless steel screws.

8.1.3 Provide and install new gutters and downpipes:

- Alumasc Water Management Solutions
- Heritage Beaded Deep Run gutters
- Heritage Circular RW3 (100mm) downpipes, with ears.
- Colour black (RAL 9017m) with Mill Finish for cast iron appearance.
- Downpipes to discharge via shoes into aisle gutters.
- Access points not required.

- Allow for all necessary fixings and accessories as required.

9.0 Additional Works

9.1 Decoration

9.1.1 Door from Tower to Access Nave Roof: Ease and adjust ~~Nave d~~D~~oor~~oor to ensure smooth operation.

9.1.2 Allow to decorate all exposed timber work to the Nave and Chancel Roof areas (i.e. fasicas, nave door door surrounds, eaves feet etc) with Dulux Trade Ultimate Woodstain.

9.2 Access Ladder

9.2.1 Provide and install CAT Ladder to access the North Aisle.

9.2.2 Final design to be agreed with specialist access company but to include:

- Aluminium construction
- Access ladder comprising steps, not rungs.
- Ladder to be permanently fixed to clerestory walls and not secured to the roof slopes. Roof slopes and gutters not to be impacted by installation.
- Ladder feet not to be left touching roof slopes where possible and rely on fixing into the clerestory walls for stability.
- Top loop side rails to both sides, 800mm high.
- Nominal 600mm wide
- Compliance with relevant access and working at height legislation.
- Final location to be agreed on site but sited with least visual impact from ground level.

10.0 Completion & Handover

10.1.1 Clean down all areas externally to the satisfaction of the CA before striking scaffold.

10.1.2 Strike the scaffold, cleaning all mortar and other debris as scaffold is removed. On completion of the striking of the scaffold allow to jet-wash the tarmacadam at ground floor area, sweep up and remove from site all debris.

10.1.3 Strike and remove Heras fencing.

10.1.4 Make good to any damage caused throughout the site, paying particular attention to the tarmacadam and remove any protection.

10.1.5 Re-seed external areas damaged in the Contractor's compound.

Return all keys to the client.

Appendix A : Scaffolding Specification

A.1. Generally

To be read with general conditions and preliminaries and other contract documents.

Due to the historic status of the building the Employer and Project Team need to be confident that the scaffold will be able to fulfil the requirements of the scaffold specification.

The scaffold must be designed the following parameters;

- The scaffold must be completely freestanding; **no fixings into the building will be permitted.** Butts will be permitted subject to suitable protection.
- Airflow sheeting is to be used to protect the building and the public during the works.
- Permanent stair and ladder access is required to all lifts to confirm to Health and Safety requirements. It is permissible for the stair to be outside the main scaffold line.
- Lifts are not to be set at levels which could result in accidental damage to period features.
- The scaffold is to remain in position to allow the Contractor to complete the task.
- The erection of the scaffold is to be designed so as to limit the area of restricted access around the building.
- The requirements of Ecclesiastical Insurance Checklist must be adhered to; deviation from this should be noted with the tender return.
- Particular care should be paid to the steep banking behind the tower, location of street furniture, headstones and trees etc around the tower.
- A platform hoist may be provided, subject to agreement with the CA. The contractor should allow for the provision of generators
- Scaffolding to be provided with monitored alarm system in accordance with any requirements from insurers – see also Security Section.

The Scaffold Contractor is required to provide details of subcontractors and suppliers

Where the method statements, drawings, calculations, samples or approvals must be supplied four weeks before programmed erection. These periods should be indicated on the Contractor's programme.

All scaffolding, including all alterations, for the effective completion of the works must be included within the tender price.

The Scaffold Contractor will need to clearly advise any other works required by others with their tender return and these should be priced by the main contractor.

The Scaffold Contractor is to be a registered member of the NASC (National Access and Scaffolding Confederation).

A.2. Scaffold Design:

The Scaffold Contractor is required to prepare proposals based on the parameters set out in this specification, including drawings. The proposals are to be of an extent and detail commensurate with the complexity of the contract and with the degree to which they are critical.

Scaffolding contractor is to accept responsibility for the accuracy of all drawings and documents submitted for comment. Approval or acceptance by the Contract Administrator in no way diminishes the Scaffold Contractor's

responsibility for any errors or omissions contained in such drawings or documents nor for their other contractual and legal obligations. Where changes are required to drawings previously submitted arrange for the changes to be made and submit revised drawings for approval.

When taking dimensions from drawings, at any stage of the work, including before work is commenced:

- Do not scale from drawings,
- Check their compatibility with each other, with the site and with work completed to date,
- Inform the Contract Administrator of any discrepancy and seek their instructions.

Where specification references are given on drawings to define the clause (or clauses) applicable to that part of the construction drawn, they must not be taken as excluding any other relevant information contained in other clauses of this specification.

The Scaffold Contractor is to agree with the CA the requirements of all lift positions, and the length of time the structure will be in position, together with other relevant information, unless stipulated within the Contract Documents.

The Scaffold Contractor will attend site meetings as are necessary for the proper management and coordination of the erection of the scaffold.

The Scaffold Contractor will be responsible for providing a documented design with calculations for the erection, use and dismantling of scaffold structures and for the integration of these activities within the overall work programme. The Scaffold Contractors must submit details of the following, when requested to do so;

- Design,
- Full set of calculations,
- Manufacturer's details for specialist equipment such as ladder beams and cluster proper, roofing sheets, side sheeting etc.,
- Risk assessments,
- Method statements covering erection, use and dismantling.
- Scaffold Contractor will have to demonstrate:
- A sound Health and Safety Policy.
- Adequate Employers and Public Liability Insurance.
- Scaffolding operatives should be registered under the Construction Industry Training Board (CITB).
- Scaffolder's Record Scheme to identify the level of competence.
- All operatives are fully trained, registered and competent in activities undertaken.
- All work is adequately supervised by competent trained Supervisors.
- Materials conform to the specified standards and are regularly checked and maintained.
- Work is carried out in accordance with relevant codes of practice.
- Registration with National Access and Scaffolding Confederation (NASC).

Access and Working Scaffolding: Access and working scaffolding should be designed, constructed and used in accordance with BS EN 12811-1:2003, Temporary works equipment. Scaffolds. Performance requirements and general design (formerly, BS 5973:1993) and all statutory regulations. Scaffold structure should comply with: Special Scaffolds.

A.3. Special Scaffolds:

These will include all access and working scaffolds. All special scaffolds should be designed by a competent person. These generally cover:

- Cantilever scaffolds
- Protection fans
- Cantilever loading bays
- Truss out scaffolds
- Freestanding towers
- Power line crossing
- Guys and struts
- Access birdcages
- Hoist towers
- Ladder towers
- Stair towers
- Slung scaffolds
- Pedestrian bridges and walkways
- Temporary ramps and elevated roadways
- Masts
- Lightning towers and Transmission towers
- Lifting gantries
- Temporary buildings
- Temporary roofs
- Spectator terraces and seating stands
- Temporary site storage
- Sheeted scaffolds including open mesh sheeting
- Scaffolds deriving lateral support from buttressing
- Scaffolds including a standard bearing on a bridging beam or bracing.

A.4. Certification:

Allow for independent Consulting Engineer to fully check both calculations and drawings and provide written confirmation and approval of design and calculations. Consulting Engineer to confirm scaffold has been erected to agreed designs on completion of erection. The engineer will be required to demonstrate Professional Indemnity Insurance to a level of £2,000,000.00 for each and every claim. Renewal certificates should be forwarded to the CA for the duration of the Contract.

A.5. Control of the Work on Site:

Adequate supervision must be provided by the Scaffold Contractor at all times during erection and dismantling of scaffolding and temporary structures.

Designers of special scaffolds should, under the terms of contract, be required to attend site on the first day of erection to liaise, and brief the Scaffolding Supervisor on the requirements of the design.

Designers should be required to emphasise that any variations to the design will not be permitted, without the designer's written authority. Any agreed variations must be clearly documented, checked by a competent person with details passed to the CA.

Designers should also be required to visit the site at least weekly during erection. On completion the Designer should certify to the Scaffold Contractor that the scaffold has been erected fully in accordance with the design and any approved variations. Copies of the certification should be passed to the CA and CDM Coordinator.

No alterations must be made at any time without written authority from the Designer and informing the CA.

At all times during erection, dismantling or alteration to scaffold structures, access to the working area needs to be clearly defined by suitable barriers and notices. Notices stating "incomplete scaffold" should be secured as necessary in an appropriate place.

It is a wise precaution to stop all work on external scaffolding during a thunderstorm.

A.6. Inspections

All scaffolds and structures should be inspected at least every seven days (and after weather conditions likely to have affected their strength or stability) by a competent person.

Records of such inspections together with necessary action must be made in Health and Safety Scaffolding Register and signed by the person making the inspection.

The Scaffold Contractor to provide an emergency number for the Client to make contact out of hours.

A.7. General Requirements

Loadings:

Platform loads shall be appropriate to the designation of the scaffold but not less than 2.5kN/m2. The Scaffold Contractor should allow for the worst conditions.

Snow Loads To be in accordance with BS 6399.

Loading on Existing Structures: The scaffolding may only bear onto the building with the consent of the CA.

Wind Loads to be in accordance with BS 6399-2: 1997.

Materials:

The preferred scaffold will be a system scaffold such as Layher or tube and board scaffold will be permitted subject to approval by CA relating to scaffold staircases, fixings, etc.

- Fitness for Purpose: Due to the duration that the scaffold will be erected all materials will be chosen to be fit for purpose and to last for the period. All scaffold to conform to BS EN 12810 and BS EN 12811.
- Ladders: To be to BS EN 131-1 and BS EN 131-2.
- Staircases: as in BS EN 12810
- Sheeting: Side sheeting to be Airflow Flame Retardant vented scaffold sheeting (Standard LPS1215).
- Netting: Nylon woven green debris netting, with neoprene rubber anchor straps.

- Plywood Sheeting: Exterior quality WBP 19mm thick to BS 6566.
- Anchor Sockets: Will not be permitted into the building.
- Foot Butts: Will be permitted providing suitably protected with plywood and polystyrene pads. Single butts must be able to be removed to allow repairs to fabric below.
- Ties: Ties to the building will not be permitted.
- Kentledge: Where required the scaffold will be held down with kentledge. The Contractor should provide details for the proposed kentledge for approval. The following will not be acceptable: scaffold tubes, water containers, ground anchors.

Standards & Lifts

The support structure of the scaffold should be located as necessary to maintain access to all entrances, footpaths, roads and services.

Around the exterior handrails and toe boards will be required. Lifts to be set out to suit the principle features, consult CA for further guidance where necessary.

Ladders Access

Provide ladder and full stair access for the full height of the scaffold in two positions set as far apart as practicable and not located so as to interfere with access to the face of the building. Position to be agreed with Contract Administrator. Ladders to extend one lift at a time. Stair to be designed to allow the evacuation of injured operative.

Lightening Protection

Bond scaffold to suitable lightening conductor terminal(s) driven into the ground or in pits in positions agreed with the Contract Administrator to comply with the requirements of BS EN 62305:2006 and carried out by an approved lightening conductor specialist. Test connection(s) and continuity through scaffold on completion of the contract. Provide details of lightening protection proposed with the tender and to the approval of the Contract Administrator

Fixings/Ties:

Scaffold to be fully independent with no physical fixings into the fabric.

Public Access

During erection, modification or dismantling, care must be taken to exclude the public and staff from a clearly defined area around the work.

Authorised access thoroughfares must have effective protection in the form of fans, netting, sheeting, brickguards etc to protect persons from falling objects.

Ladder and stair access must not be accessible to the public.

Security:

The Scaffold Contractor should ensure that the site is securely fenced off and out of hours it is securely locked to prevent unauthorised access. The security fencing should also be included in the inspection schedule to check for vandalism etc...

Refer to Ecclesiastical Insurance's Checklist for security provisions to be complied with in respect of lighting, hoarding, alarms.

Adaptations

Scaffold contractor to allow for provision, adaptations and maintenance of all platforms, ladders, hoists, scaffolding, sheeting, hoarding, temporary roofs and protection as necessary for the proper execution of the works including that required for sub-contractors. Inspect regularly in accordance with the regulations and maintain records of these site inspections.

All scaffolding, including all alterations, for the effective completion of the works must be included within the tender price.

Protection

To prevent damage to the existing building, its fittings and furniture. Any damaged caused to the building due to the scaffold is to be made good to the approval of the CA at the Scaffold Contractor's expense.

Permissible Bearing Pressure:

Ensure that the permissible bearing pressure of the ground or of the building below the structure is not exceeded. Set standards on scaffold boards to spread the load, taking care not to block access to drains, rainwater channels, outlets etc. Where founded on soil, set out on appropriate spreaders as sole plates. Provide protection to any underlying stone, leadwork, asphalt etc. with 50mm polystyrene and 19mm plywood as base for scaffold supports.

Loads from all temporary structures are not to be transmitted to the existing building unless specifically indicated in this document or specifically agreed with the CA. Any proposals for horizontal restraint from uplift and lateral forces are to be agreed with the CA.

The Scaffold Contractor should carry out an inspection to check the locations of all drains and underground services, and the scaffold should be placed to avoid any known drainage.

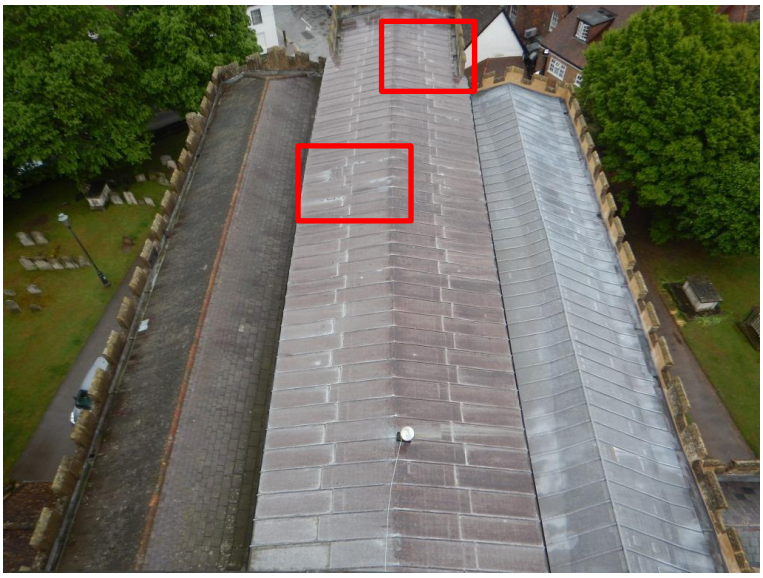
A site investigation report is not available. The Scaffold Contractor must make assumptions and include these in the risk assessment.

The Contractor shall identify each surface condition and provide adequate support for the scaffold structure and anchors as necessary for each type identified.

Appendix B : Photographs

PCC St Mary the Virgin Church
St Mary the Virgin Church
Nave & Chancel Roof Repairs

BA REF: P17-034
REVISION: Tender Issue



Photograph 1
North Aisle, Nave & Chancel, South Aisle Roofs as viewed from Tower

Areas of multiple patch repairs highlighted (excluding ridge) and leaks.

Photograph 2
Nave Roof comprising hollow core rolls.

Note shadowing to leadwork where boarding beneath can be seen where lead has thinned significantly.

Photograph 3
Note shadowing to leadwork where boarding beneath can be seen where lead has thinned significantly.

Contractor to Initial

Photograph 4
Chancel Parapets in made-up masonry the surface of which is delaminating and exposing the built up core.

Photograph 5
Chancel parapet masonry failures

Photograph 6
Chancel parapet masonry failures

Appendix C: Record Drawings

P17-034-100:	Location Plan
P17-034-101:	Outline Plan
P17-034-102:	West & East Elevations
P17-034-103:	North Elevation
P17-034-104:	South Elevation

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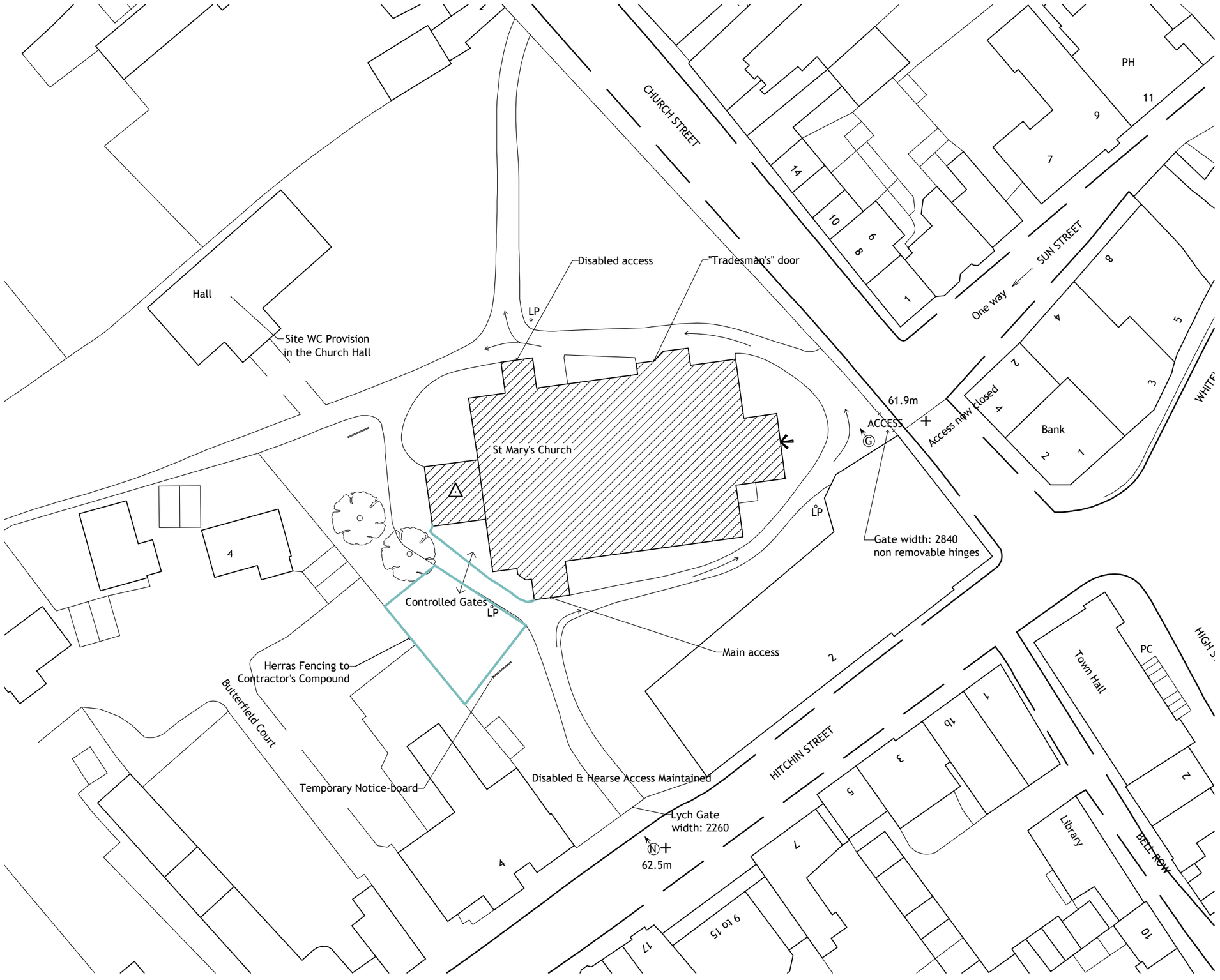

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Client:
PCC St Mary the Virgin Church

Project:
Nave & Chancel Roofing

St Mary the Virgin Church
Church Street
Baldock

Title:
Location Plan

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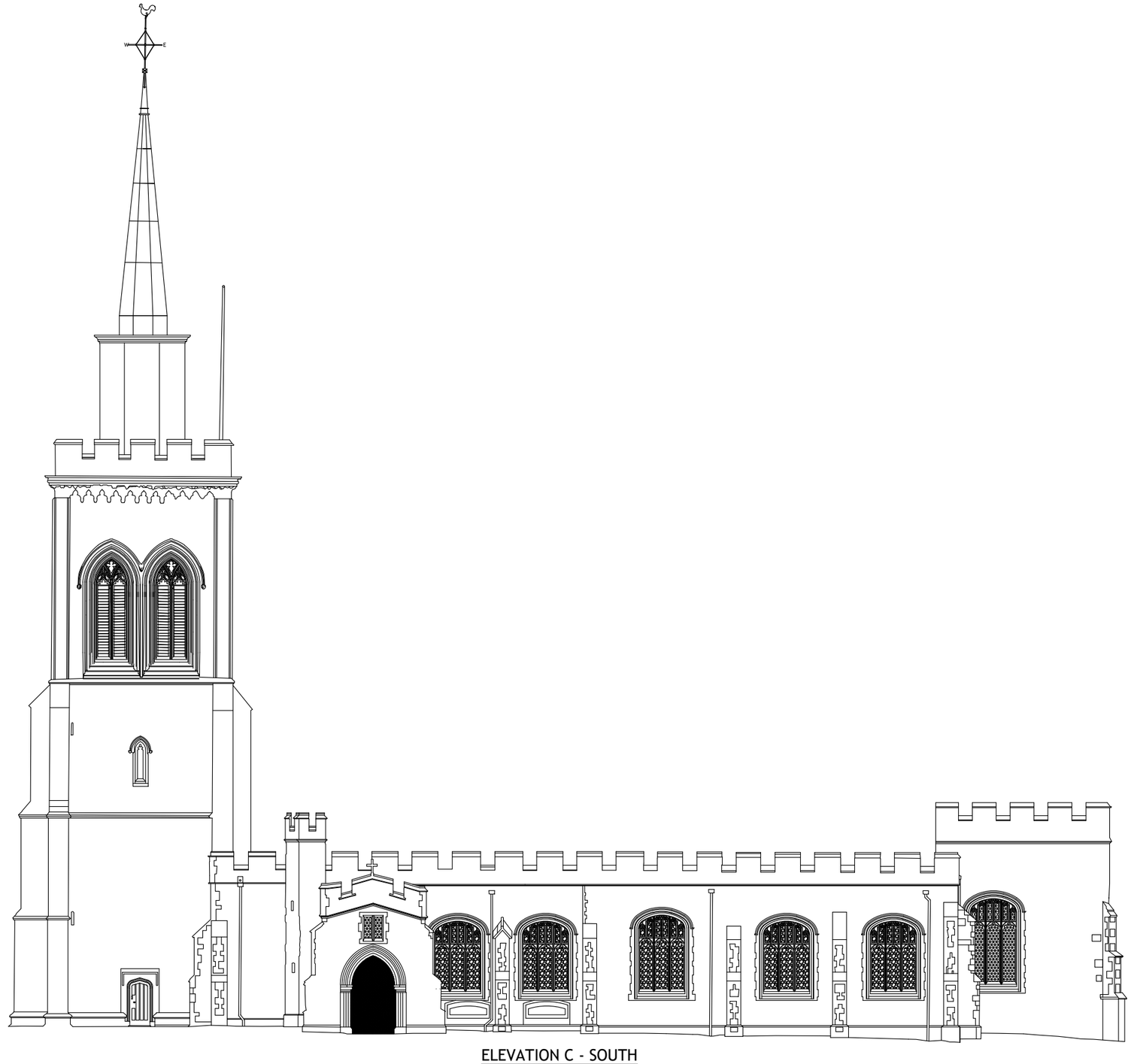

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Client:
PCC St Mary the Virgin Church

Project:
Nave & Chancel Roofing

St Mary the Virgin Church
Church Street
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Title:
South Elevation

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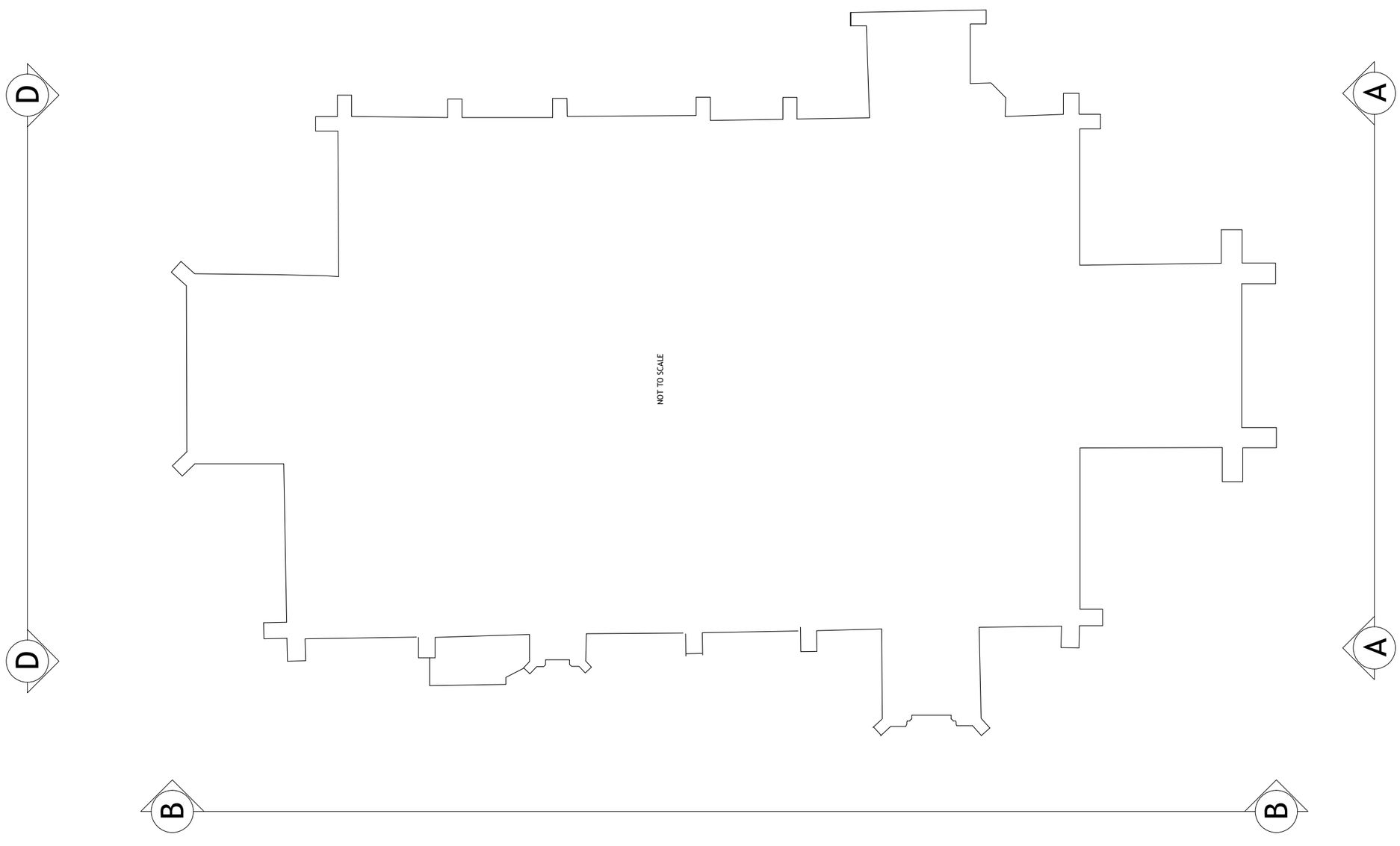

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Project:
Nave & Chancel Roofing

St Mary the Virgin Church
Church Street
Baldock

Title:
Outline Plan

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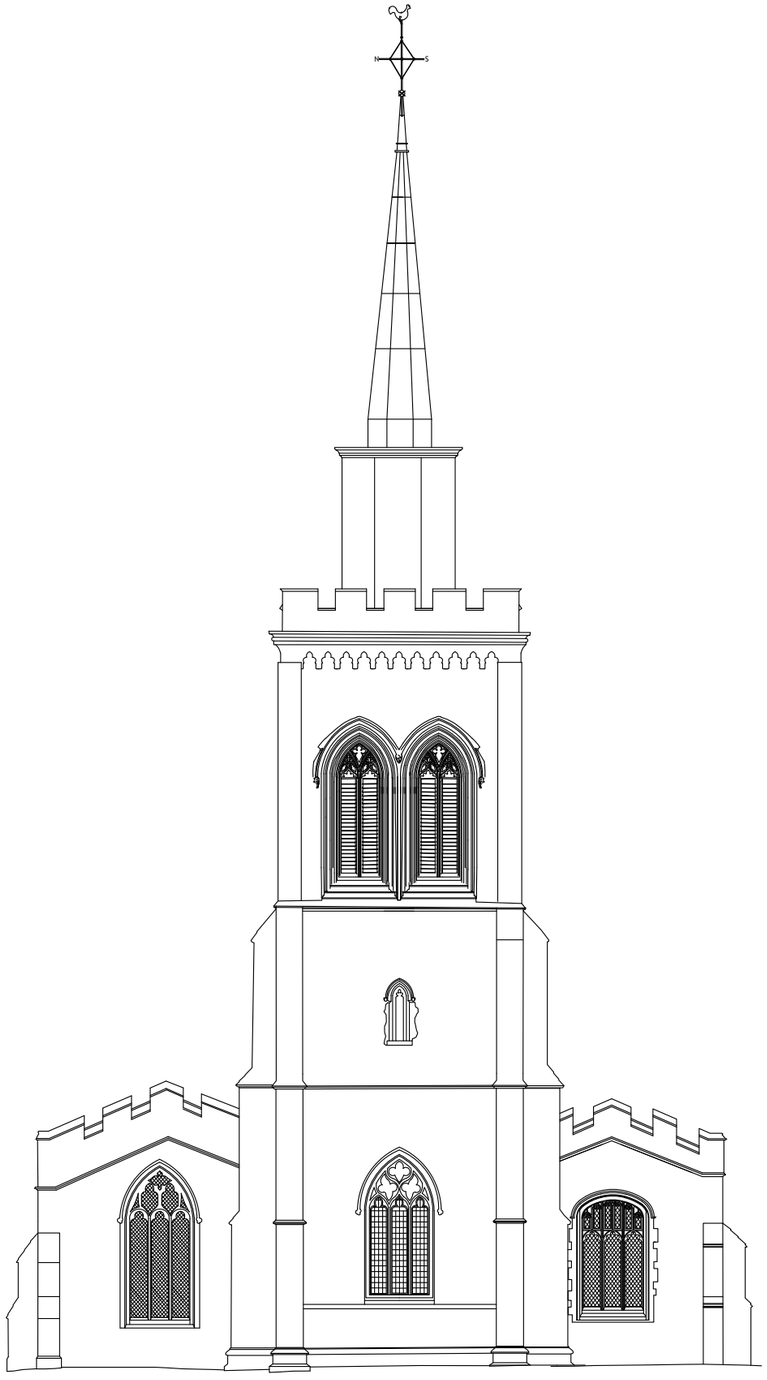

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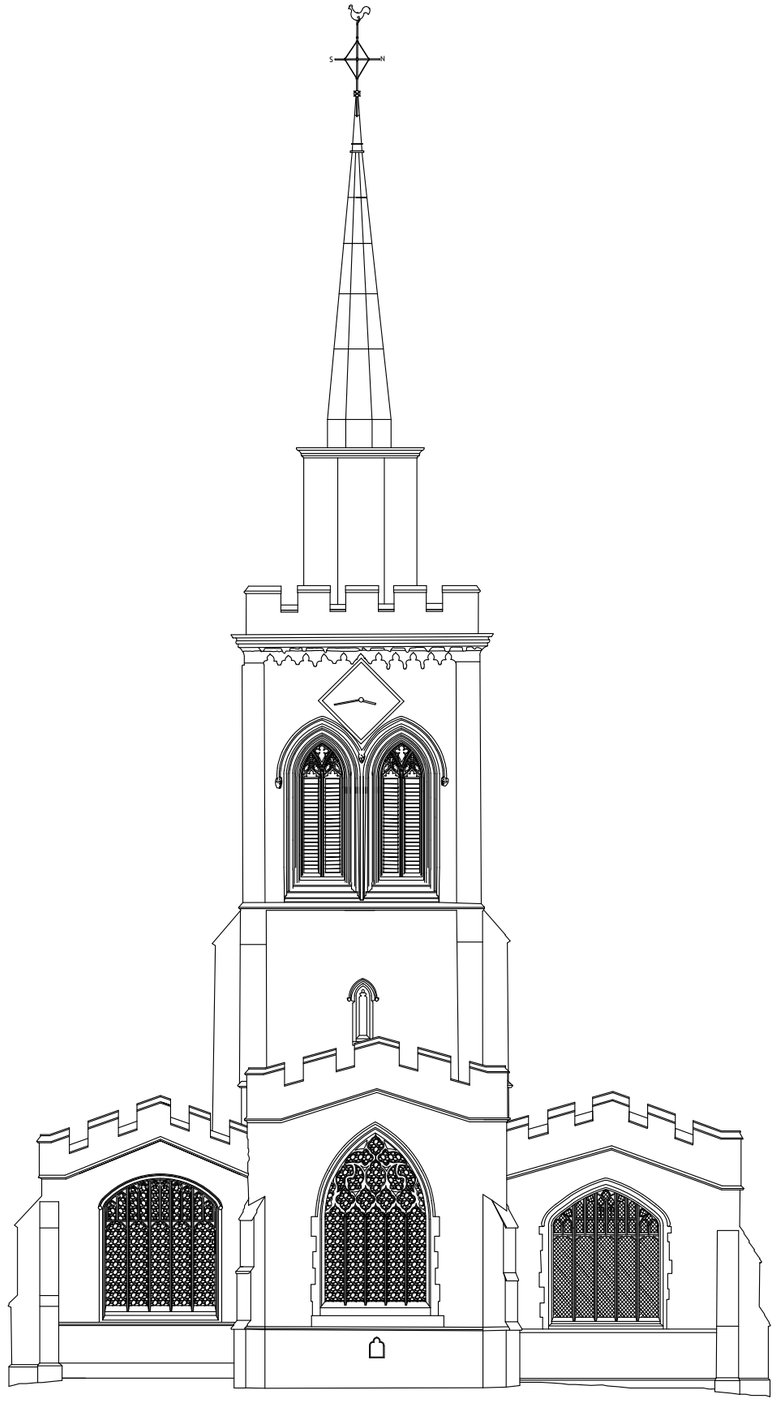

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Client:
PCC St Mary the Virgin Church

Project:
Nave & Chancel Roofing

St Mary the Virgin Church
Church Street
Baldock

Title:
West & East Elevations

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North Elevation

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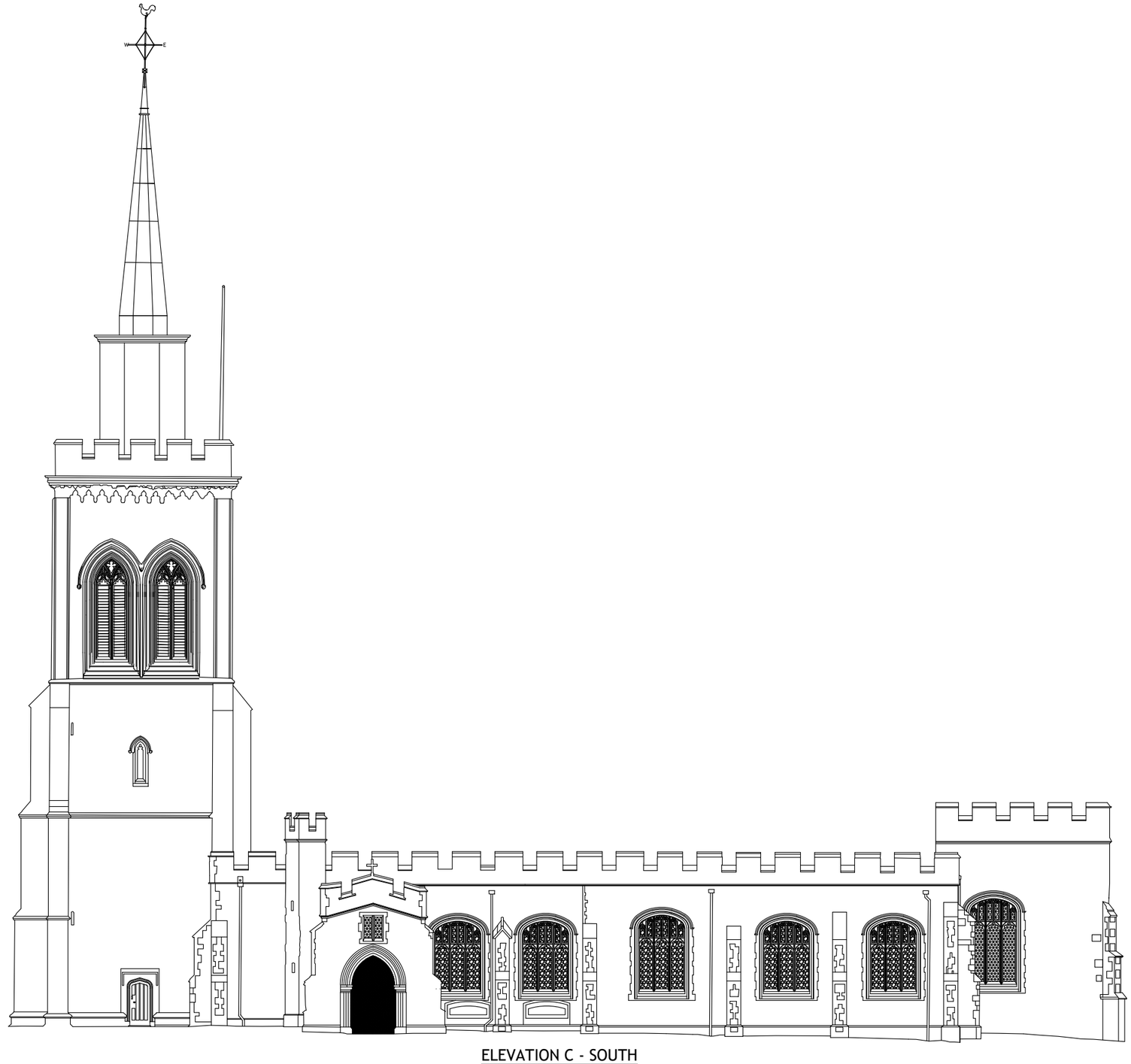

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St Mary the Virgin Church
Church Street
Baldock

Title:
South Elevation

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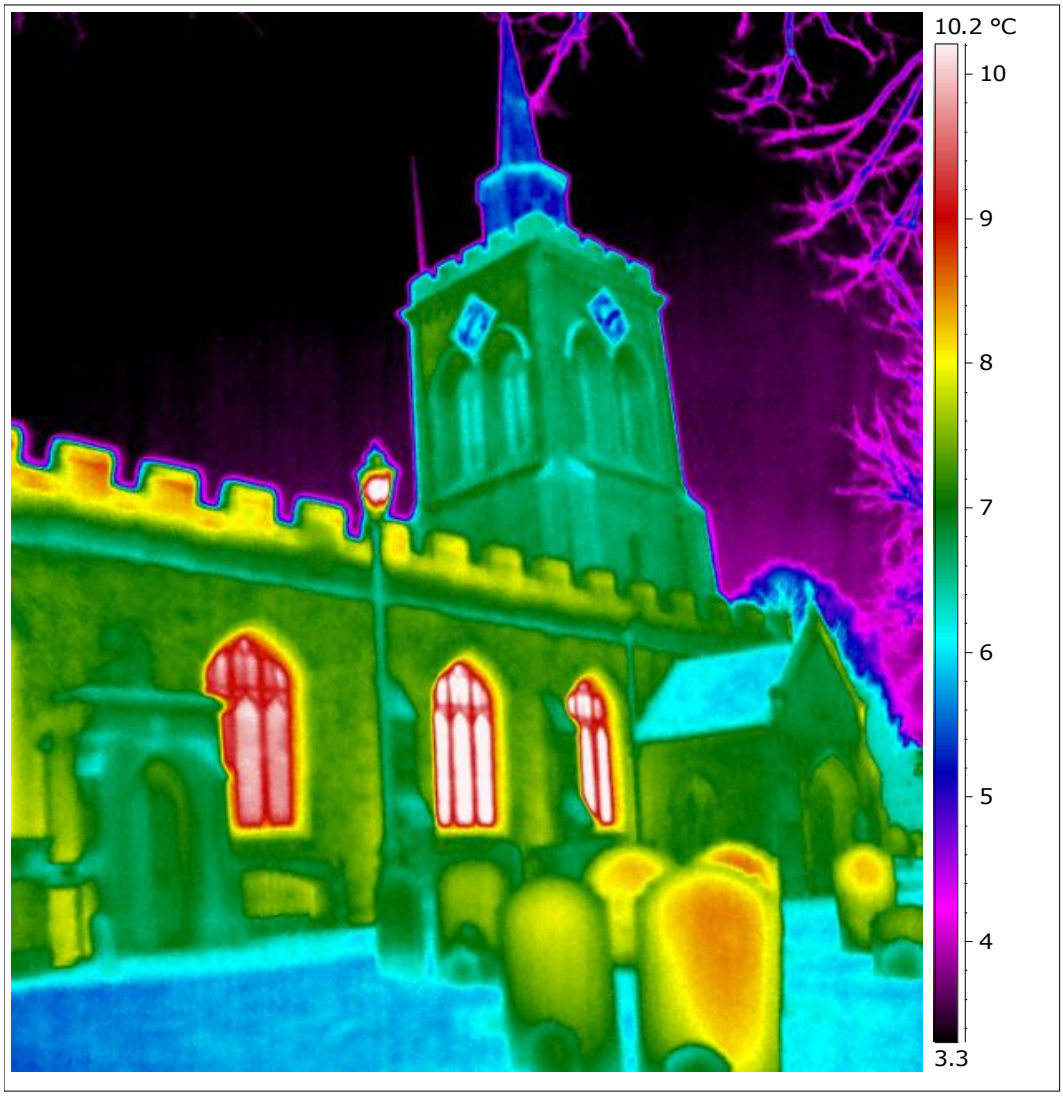
THERMAL IMAGE REPORT



Survey Site:

St Marys Church & Church Hall

Church Street
Baldock
Herts.

Date Of Survey: 01/03/2021

STANBURYS Ltd, ESTATES MANAGEMENT SOLUTIONS
IPEC HOUSE, CHURCH STREET, BALDOCK, HERTS, SG7 5AF
Tel: 01462 894144HERTS Fax: 01462 894993, Email: stanburys@stanburys.com

Thermal Image Report

Date of Survey: 1st March, 2021

Thermographer: Allister Pirrie

Client:

Survey Site:
St Marys Church & Church Hall
Church Street
Baldock
Herts

Contact Name: Rev. Andrew Holford & Paul (Church Assistant)

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1. Abstract

This survey was commissioned by Rev.Andrew Holford, to investigate any evidence of air leakage, missing/damaged insulation, thermal bridging or glazing issues at St Marys Church and Church Hall. The requirements of this survey were to identify areas where heat loss is taking place and where energy is being wasted; these areas may also allow moisture to ingress. Within this report a short narrative will accompany the thermograms to highlight any salient points. The images are being presented to the client in a clearly recognisable format. Highlighted areas may require further investigation.
The survey was conducted in fair, cold weather conditions throughout by Stanburys Ltd own level 2 certified thermographer (Allister Pirrie) using Flir Instrumentation. All images that have been included and the comments made serve simply as suggestions based on interpretation of the data at hand and should in no way be regarded as an explicit instruction to act or take action towards correcting an assumed defect. A full explanation of the scope of the survey and the method in which this was carried out is also included.

Summary: this thermal report does indicate adverse thermal anomalies on many of the outer scanned surfaces. The Centre and South roof surfaces certainly recorded thermal anomalies consistent with energy loss and possible moisture ingress and these will require further investigation. The windows were also an area of energy loss but this is expected in such a building. All reported thermal anomalies will require further investigation. Please see the image section of this report for the Thermographers interpretation and comment for each included thermogram/thermal image.

2. Survey Overview

2.1 Introduction to Thermography

Thermography is a term used to describe a type of photography that uses infrared radiated wavelengths to make pictures as opposed to visible light as in normal photographs. It can be also referred to as 'thermal imaging' or 'infrared'.
Objects that have a temperature above absolute zero (-273.15°C or 0 Kelvin) emit infrared wavelengths. Thermography is the production of thermal (heat) pictures from these wavelengths, whereby temperature measurements or comparative analysis can be made.

2.2 Brief

The survey was conducted in accordance with the criteria set out in BS EN 13187:1999 'Thermal performance of buildings' – ***Qualitative** detection of thermal irregularities in building envelopes – Infrared method. Sufficient image data shall be provided to allow a competent third party to easily understand the findings presented in the report. Any hot spots identified by the survey shall be rectified by the contractor".*
The requirements of this survey were to identify 'thermal performance' and to show areas where heat loss is taking place and where energy is being wasted.

2.3 Scope

This survey and report combines images to provide a general Thermographic Overview of this domestic property. Whilst care has been taken to record temperatures as accurately as possible, the absolute values obtained should be treated with a degree of caution. Variable environmental conditions together with changes in camera angle; distance, material change and emissivity can all adversely affect the result.

From discussions prior to the survey, the following points have been incorporated into the methodology of data collection and presentation of findings.

- The survey to be a combination of general scanning and capturing of selected images that may fairly represent the situation. **(Qualitative Survey)*.**

  - Anomalies noted to be identified either within the narrative or on the image.

- Record and include any relevant environmental and meteorological data.

***Qualitative Survey:** **Qualitative measurement: the process of obtaining and interpreting thermal images based on contrast in order to identify areas that correlate to construction or sub-surface anomalies; the purpose is more to determine where a temperature difference exists than to obtain a number for the temperature difference or the actual temperature.*

2.4 Methodology & Survey Conditions

The site was initially visited at 15.30 on the afternoon of the 9/12/20. The conditions were cold, 5°C. It was dry with full cloud cover. Digital images were taken of the property to place alongside the thermograms to aid recognition. It was noted and confirmed that the internal heating had been fully switched on for at least 4 hours prior to our visit and this had remained constant for the duration of this survey. The 'external' thermal survey of the property commenced at 17.30, approximately 2 hours after sun down.

Conditions for External Survey	Advice	Actual
Necessary surfaces free of direct solar radiation for at least 2 hours	Yes	2 hours
Temperature difference across the building fabric ≥ 10°C	Yes	14°C DT
Free from precipitation for approximately 24 hours	Yes	24Hrs +
Are the building surfaces to be inspected dry?	Yes	Yes
Is the wind speed below 10 m/s	Yes	2m/S
Item	**Start**	**End**
Time	20.15	22.00
Ambient Air Temp	<10°C	6°C
Internal Ambient Temp	21°C	Circa20°C
Wind speed Maximum	10 km/h (3 m/s).	2m/S
Cloud cover	N/A	50%

2.4a Camera Settings and Parameter Inputs.

FLIR B620, 640 x 420 High Resolution

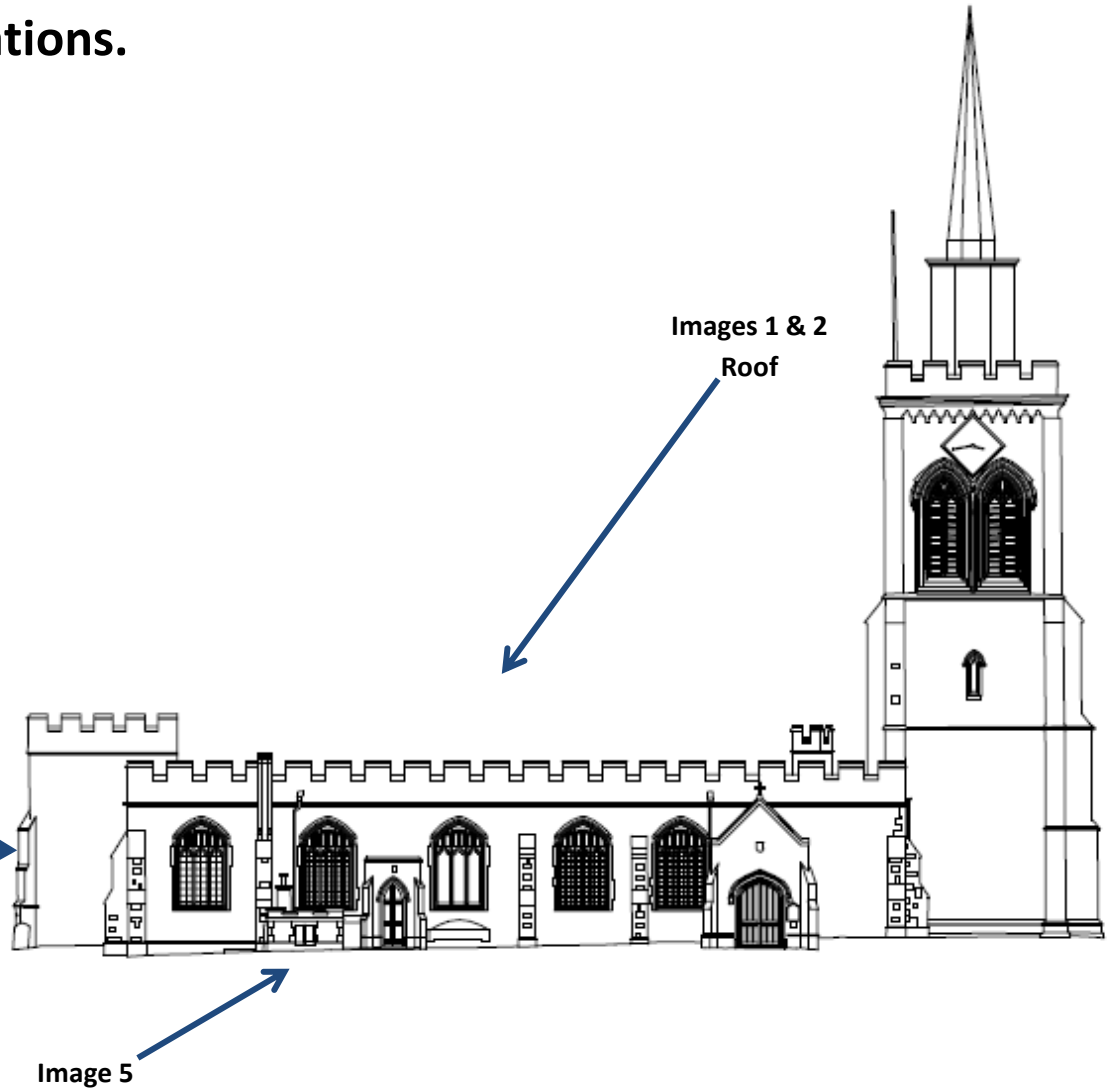
Emissivity @ 0.95 (Qualitative Survey).

TRefl @ 1.8°C (Calculated)

External Atmospheric Temperature 6°C Throughout.

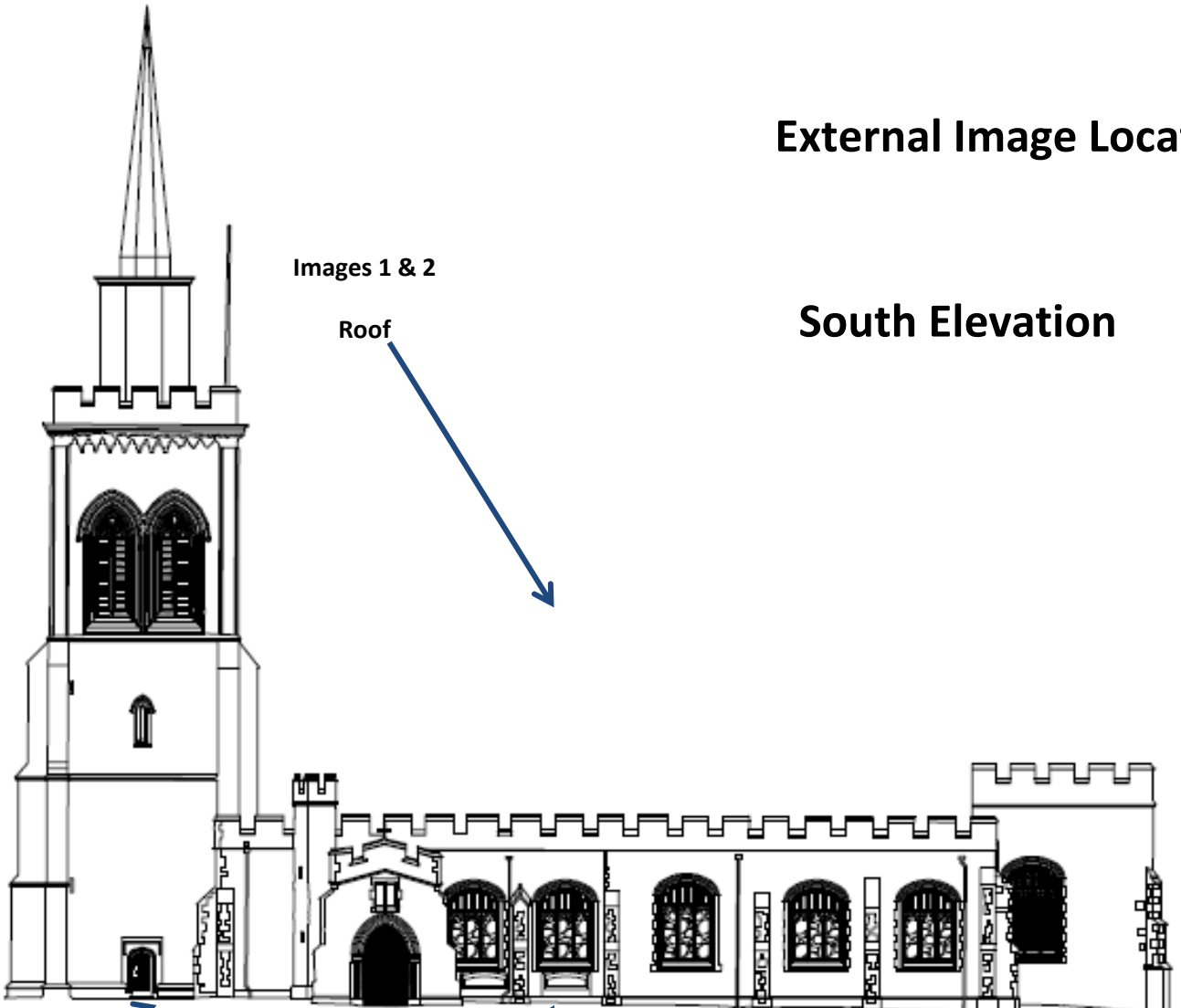
External Image Locations.

North Elevation



External Image Locations.

South Elevation



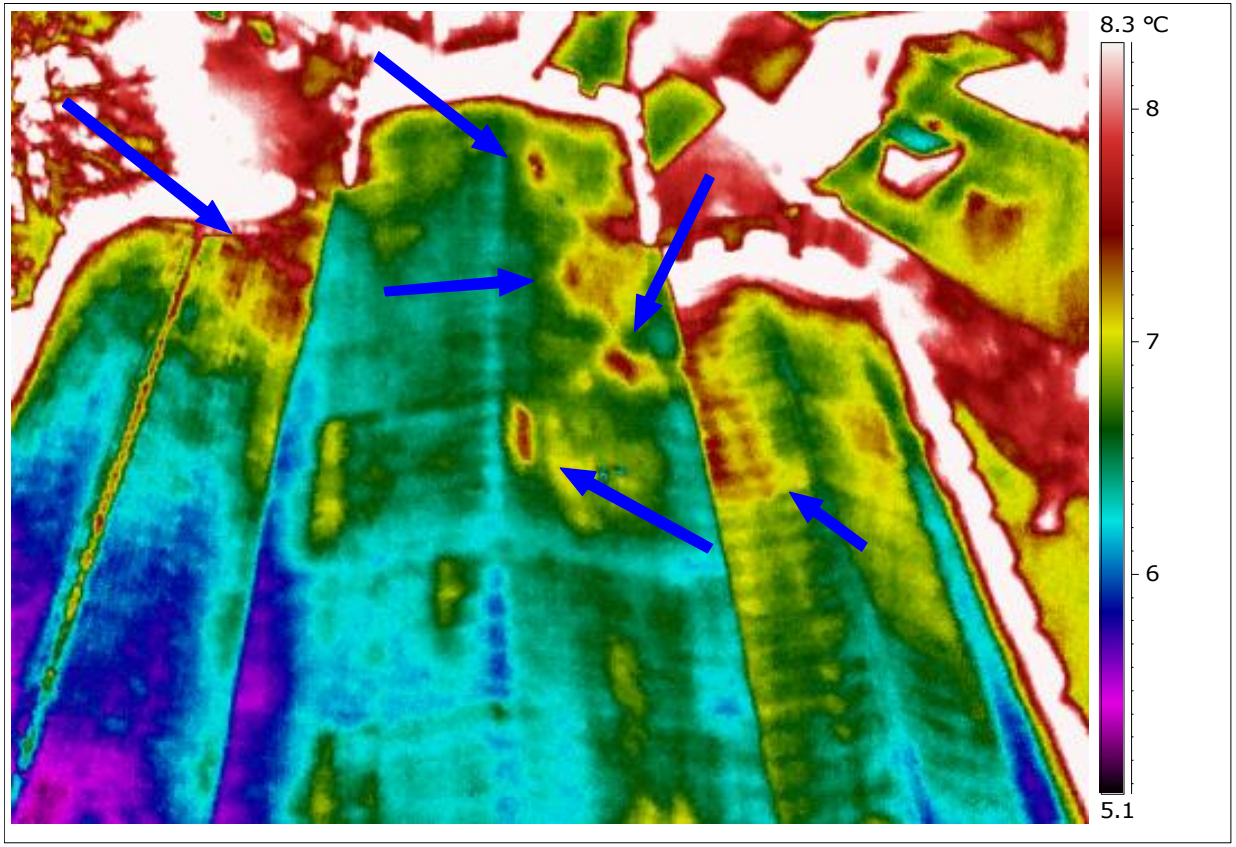


Image 1. Location. Main Roof Section – Captured from Bell Tower. Also see next image.
Comment: The thermal image was taken to show the warm, (red/yellow), thermal anomalies consistent with moisture ingress or differing insulation levels/energy loss. The arrows are indicating the thermal patterns that are more consistent with moisture ingress and these will require further investigation if there are known leaks in these areas. The following image is a continuation of this image, captured closer to the bell tower.

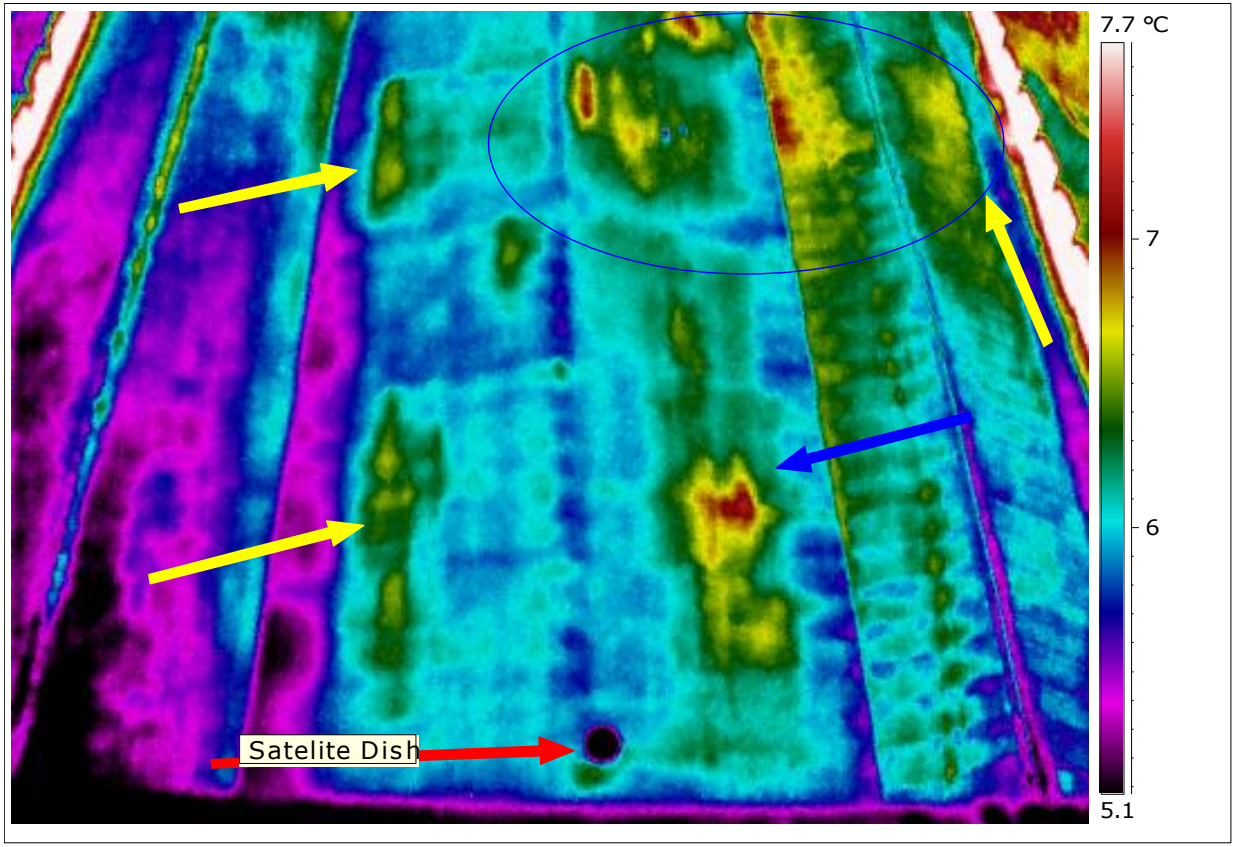
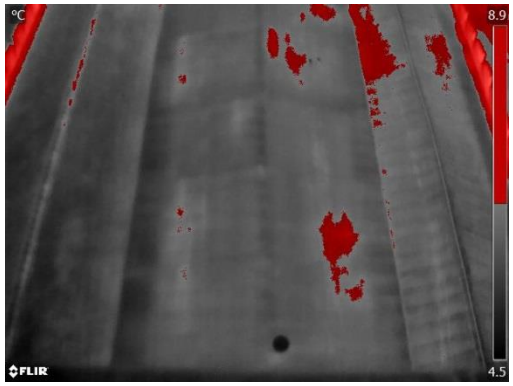


Image 2. Location. Main Roof Section – Captured from Bell Tower



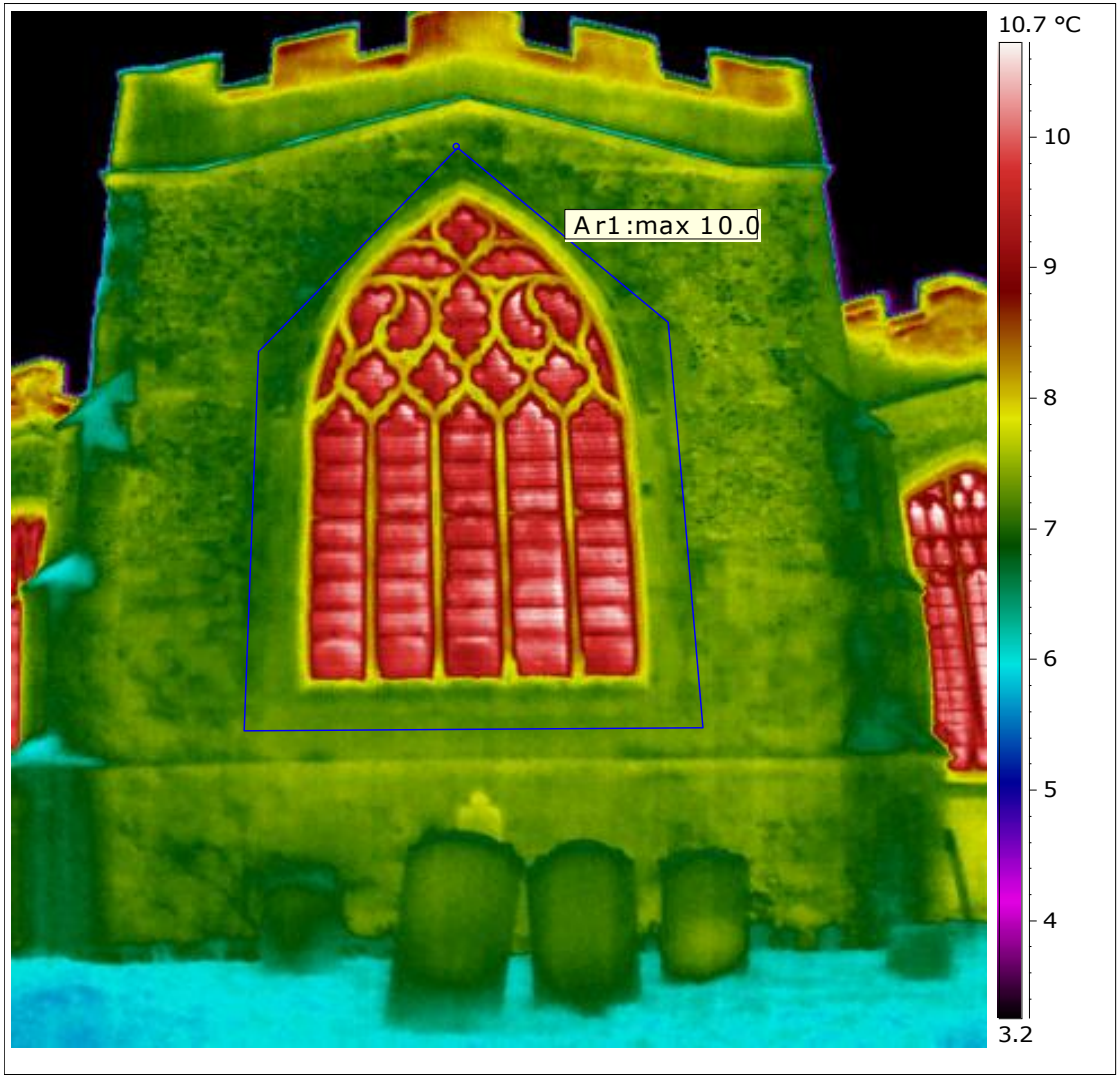
Isotherm Alarm Image. The red shades are areas recorded above the current atmospheric temperature of 6.5°C and highlight areas of concern.

Comment: The thermal image is a continuation from the previous image and indicates another large thermal anomaly consistent with moisture ingress, blue arrow. The circled anomalies at the top of the thermogram can also be seen in the previous image. The yellow arrows are indicating thermal anomalies that may also be considered as areas of moisture ingress or energy loss due to inconsistent insulation levels.
Further investigation will be required, particularly where there are known water leaks.

Atmospheric Temp	7.0 °C
Ar1 Area Max. Temp	9.9 °C
Sp1 Temperature	6.1 °C

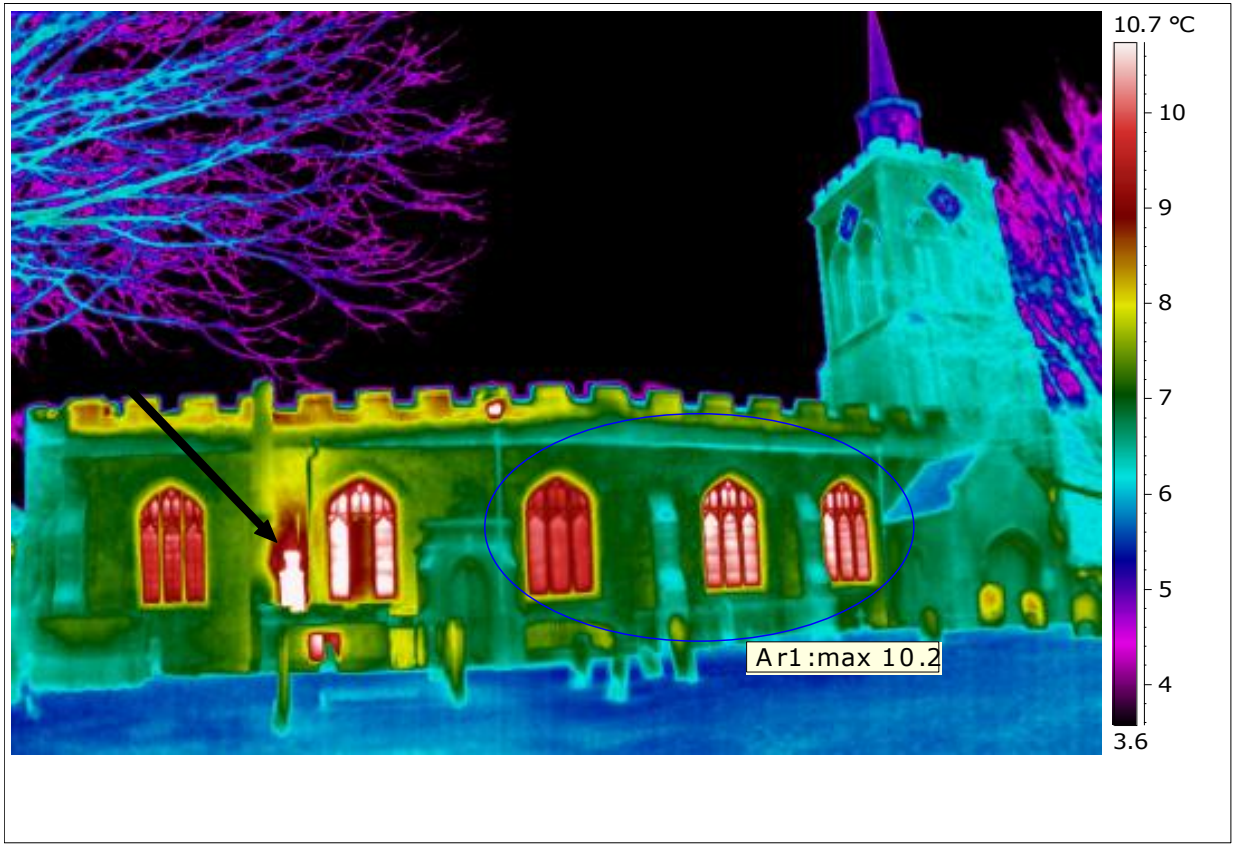
Image 3. Location. Front of Church – East Elevation.

Comment: The thermal image was taken to show that the main wall surfaces have a uniform temperature of approximately 6°C which is very close to the current atmospheric temperature of 7°C. The yellow arrows are indicating areas with slightly elevated temperatures and this is consistent with thermal bridging and conducted temperature from the roof structure which is adjoining at these points. The windows do show elevated temperatures at approximately 4°C above the current atmospheric temperature. These are single glazed and with offer a warm bridge from the internal heated areas.



Atmospheric Temp	7.0 °C
Ar1 Area Max. Temp	10.0 °C

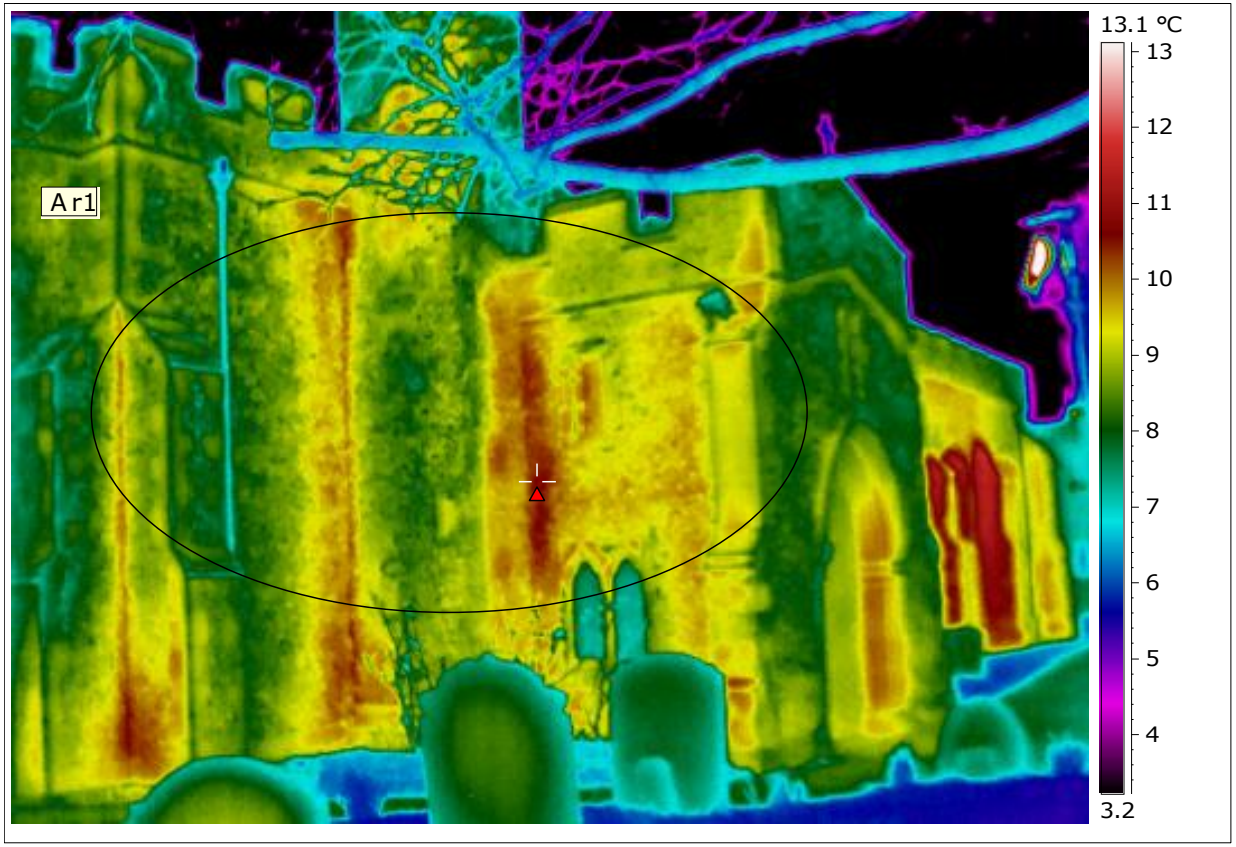
Image 4.Location. Front of Church – East Elevation.
Comment: See previous image for comment. Closer view showing more detail.

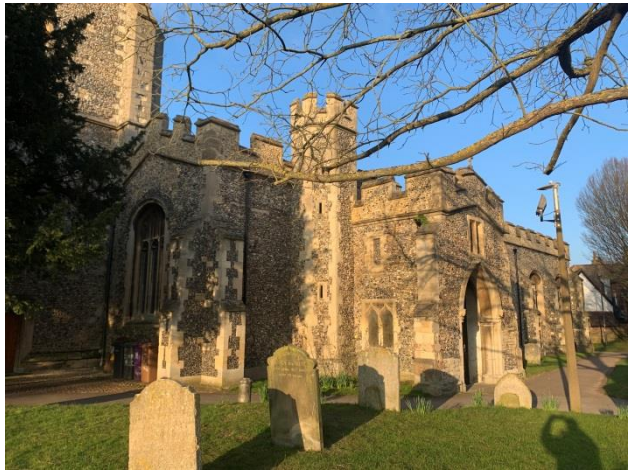


Atmospheric Temp	7.0 °C
Ar1 Area Max. Temp	10.2 °C

Image 5. Location. North Elevation

Comment: The thermal image was taken to demonstrate that this façade and these windows are showing the same thermal patterns and recorded temperatures, approximately 10°C on the windows. The arrow is indicating the warm boiler flue which is also convecting temperature onto the immediate wall surface and window creating a higher temperature. The Bell Tower appears much cooler, (green/blue) as the internal area is not heated.





Atmospheric Temp	7.0 °C
Ar1 Area Max. Temp	9.8 °C

Image 6. Location. South/West Elevation

Comment: The thermal image was taken to show the slightly higher wall surface temperatures in this area. This area is far more sheltered than the opposite façade and the hottest spot is in the corner, as marked. This is known as corner bridging where air moves far slower. There may also be indirect heating on the internal wall causing direct conduction. No thermal anomalies of concern.

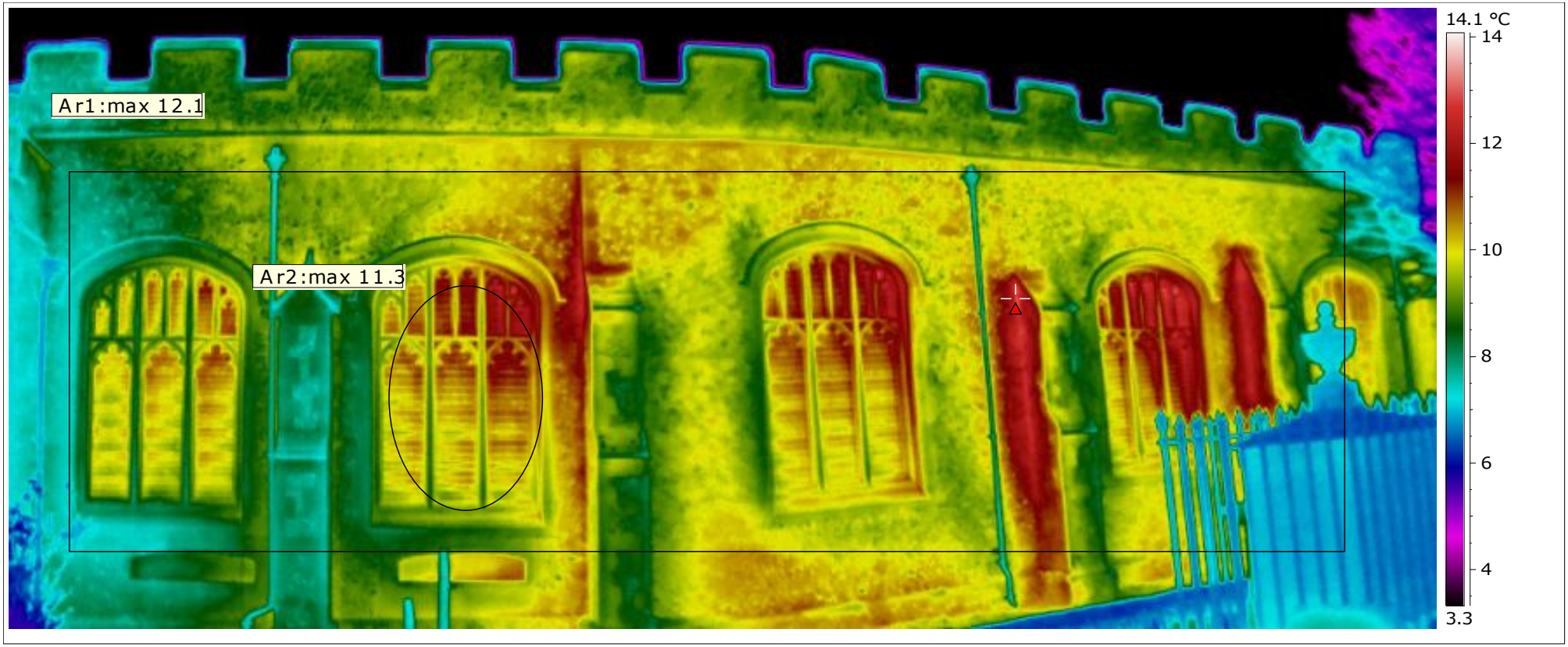
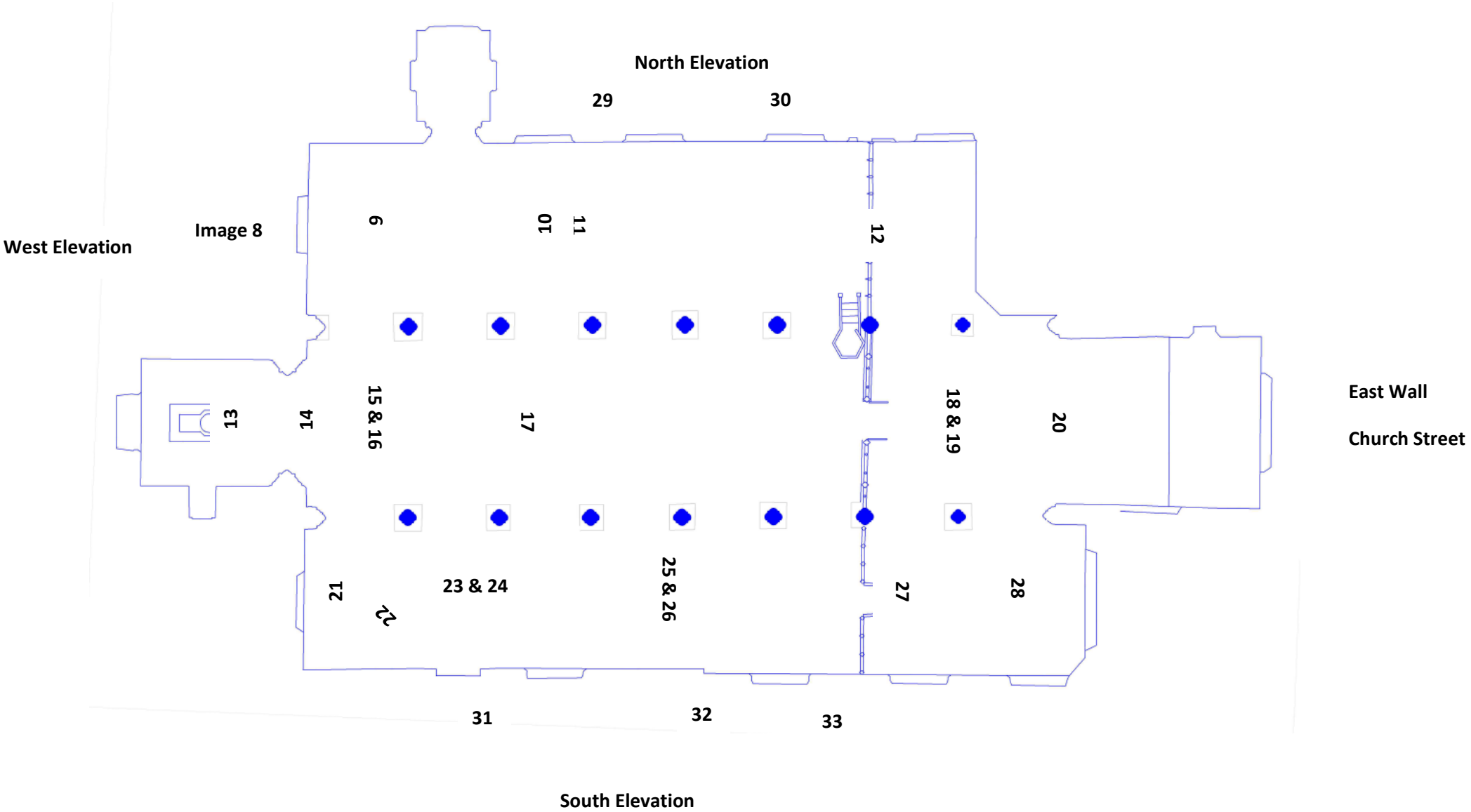


Image 7. Location. South Elevation.

Comment: The thermal image is a continuation of the previous image and shows similar thermal patterns. Warm Corner Bridging at the structure supports and warm thermal bridging on the single glazed windows. No thermal anomalies associated with building defects

Internal Image Locations



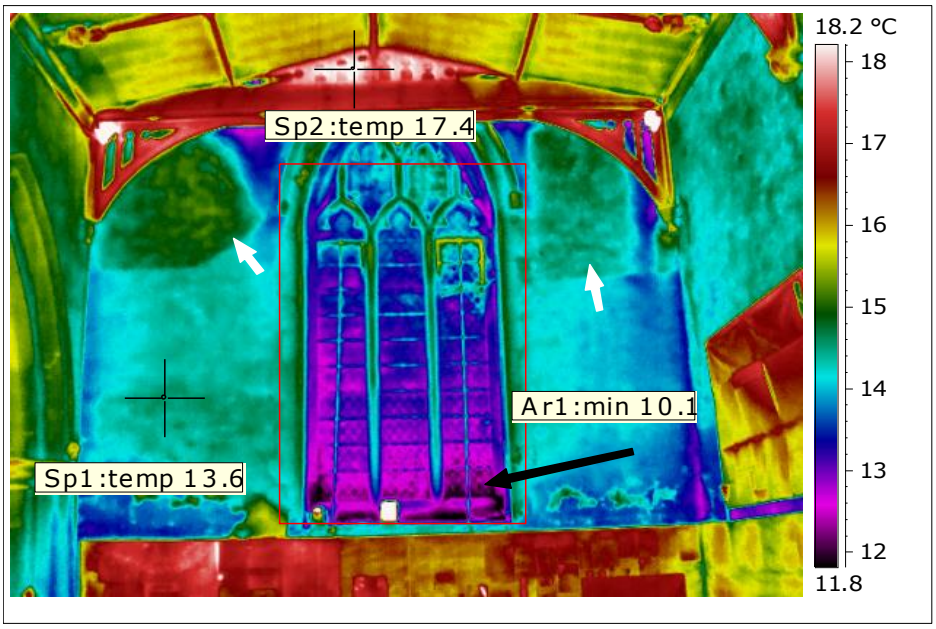


Image 8. Location: Rear of Church – North Chapel

Comment: The thermogram shows that the maximum temperature on the window surface is approximately the same as the temperature recorded on the outside. The dark colours appear colder when compared to the external images but this is due to all other surfaces, internally, being much warmer, recorded at approximately 14°C. The roof structure cross members are retaining heat due to the thermal properties of the material. The black arrow indicates a thermal anomaly consistent with cold air ingress at the bottom of the window. The white arrows are indicating differing thermal patterns, temperature differences, possibly caused by different building materials with different thermal properties, historical repairs.

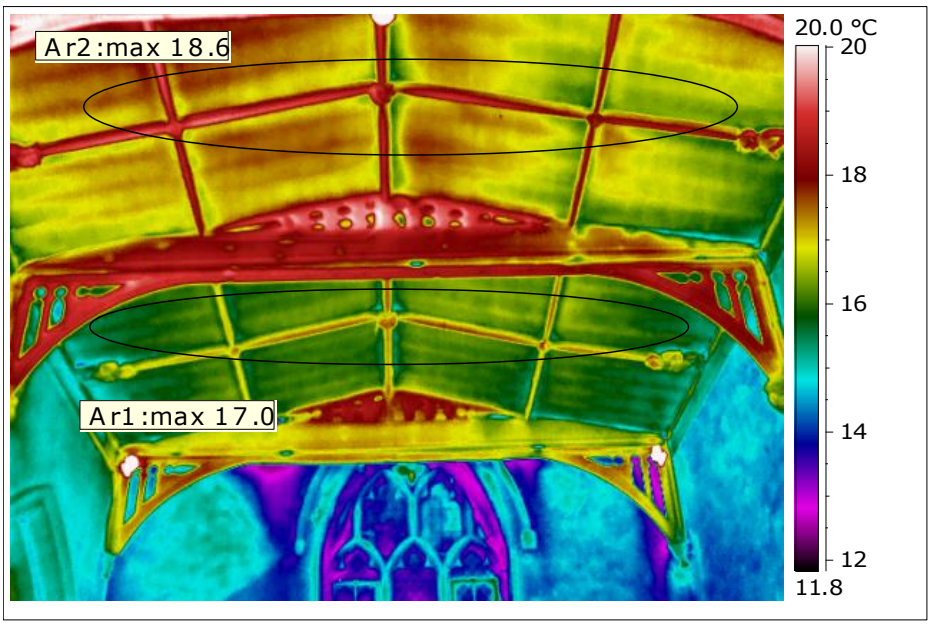


Image 9. Location: Rear of Church – North Chapel

Comment: The Thermal Image shows these 2 roof sections. Area 2 is recorded with a warmer surface temperature but this is only a 1.6°C DeltaT (temperature difference). This DeltaT may be due to the locations of local heating equipment, radiators. There are no adverse thermal anomalies that can be seen in this section.

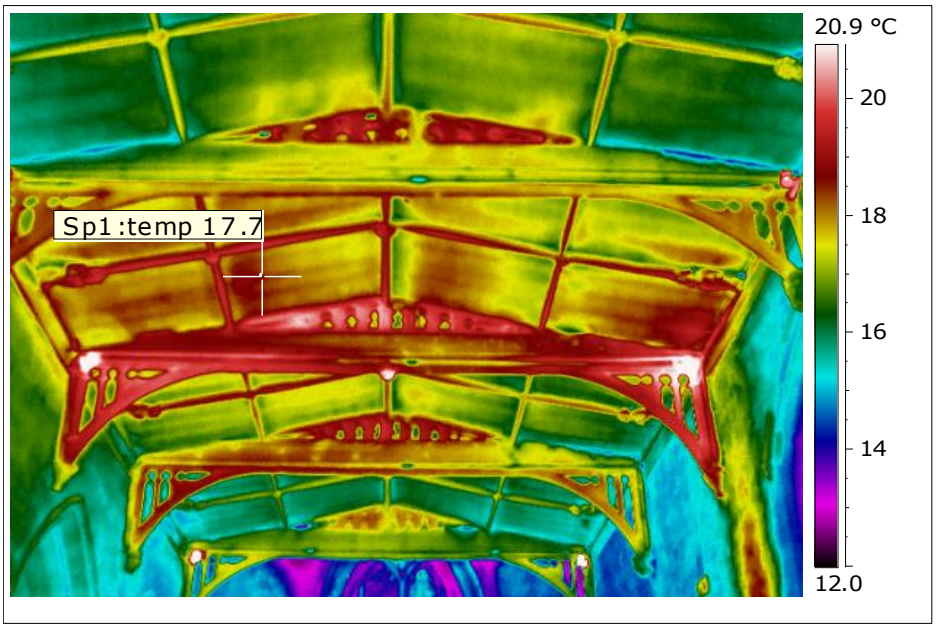


Image 10. Location: Church – North Chapel - image captured facing West/Rear
Comment: The Thermal Image is a continuation of the previous image and shows similar thermal patterns and temperatures. The thermographer is looking for cold, blue, thermal patterns that may be an indication of cold air or moisture ingress which will be due to gaps in the roof envelope. No adverse anomalies in this thermogram.

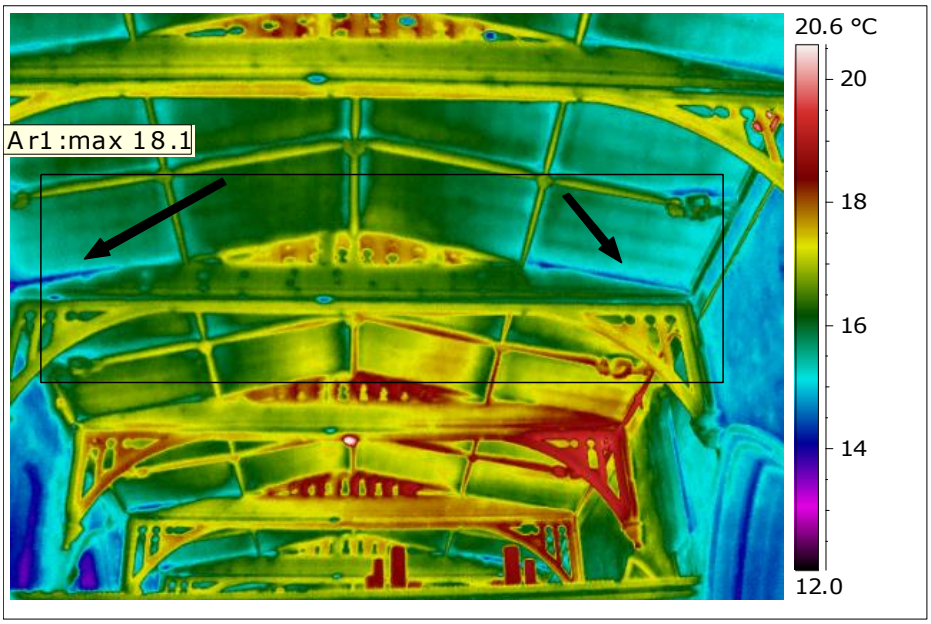


Image 11. Location: Church – North Chapel - image captured facing front/East.
Comment: The Thermal Image captured from the Left aisle towards the front of the church shows no adverse thermal anomalies. The arrows are indicating small cold anomalies consistent with minor thermal bridging or trapped air.

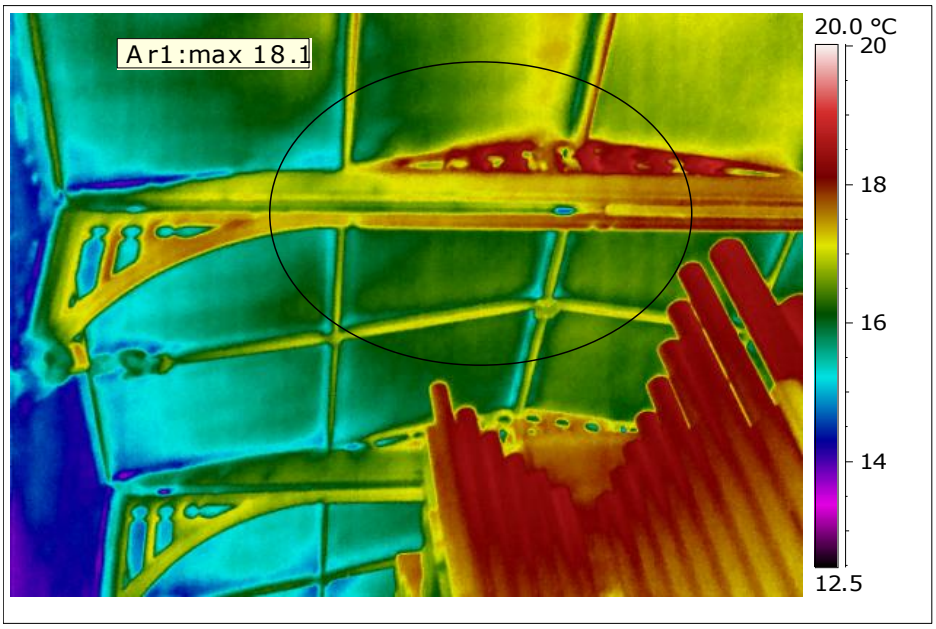


Image 12. Location: North Chapel - image captured facing front/East
Comment: The thermogram was included to show no thermal anomalies were recorded at this roof section.
Note: I believe this to be the roof section that was refurbished most recently. The external image captured from the Bell Tower did not record any thermal anomalies in this area.

Centre Roof Section – Centre Aisle.

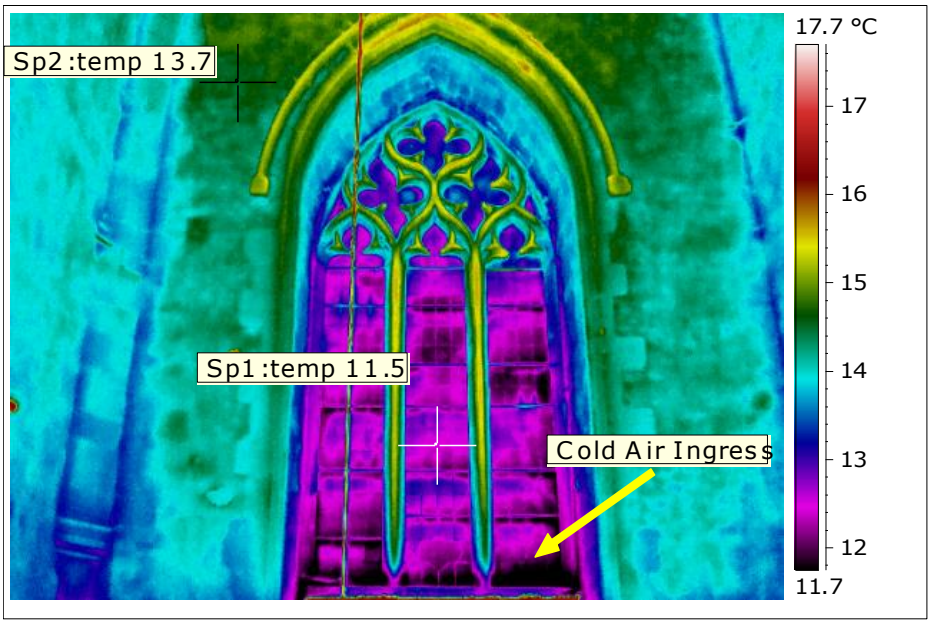
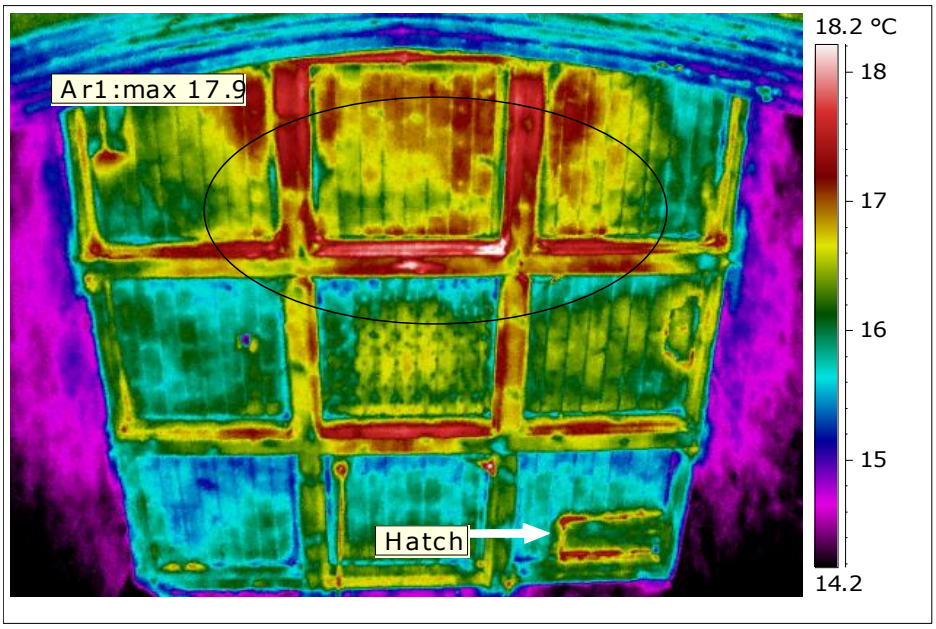


Image 13. Location: Church Centre – West Elevation – Baptism Font.
Comment: The thermogram shows that the maximum temperature on the window surface is approximately the same as the temperature recorded on the outside of the window surface and is consistent with all other similar windows included in this thermal report. The wall surfaces show a uniform temperature with no adverse thermal anomalies.



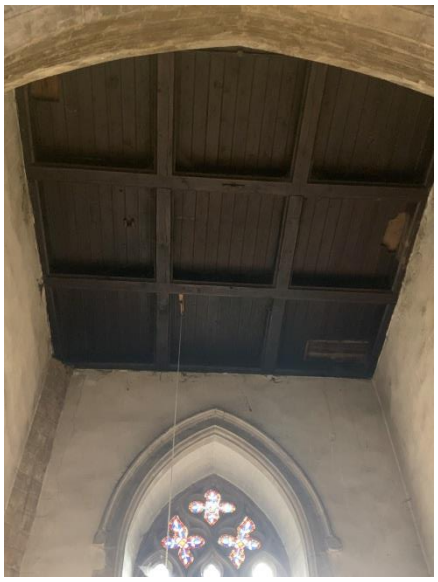


Image 14. Location: Church Centre – West Elevation – Above Baptism Font.
Comment: The Thermal Image shows varying thermal patterns/temperatures on this wooden roof section. The warmer area, circled, is directly above a heat source, radiator. It is thought that this section is below the Bell Tower. No adverse thermal anomalies consistent with building defects.

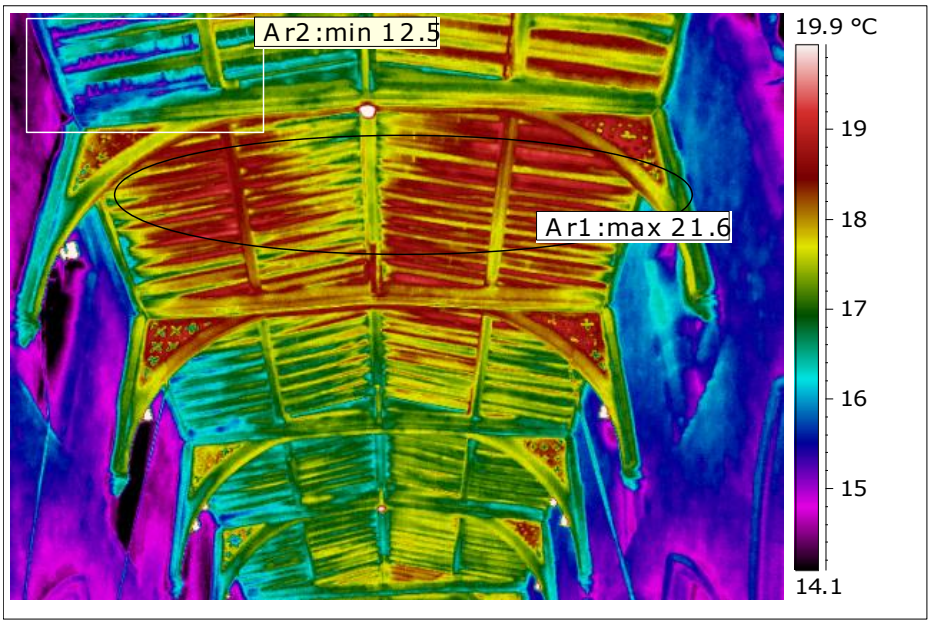
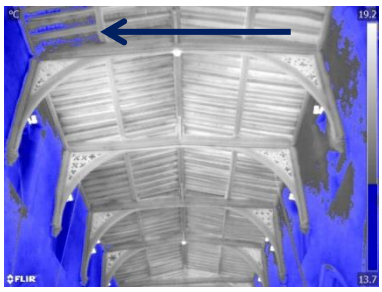
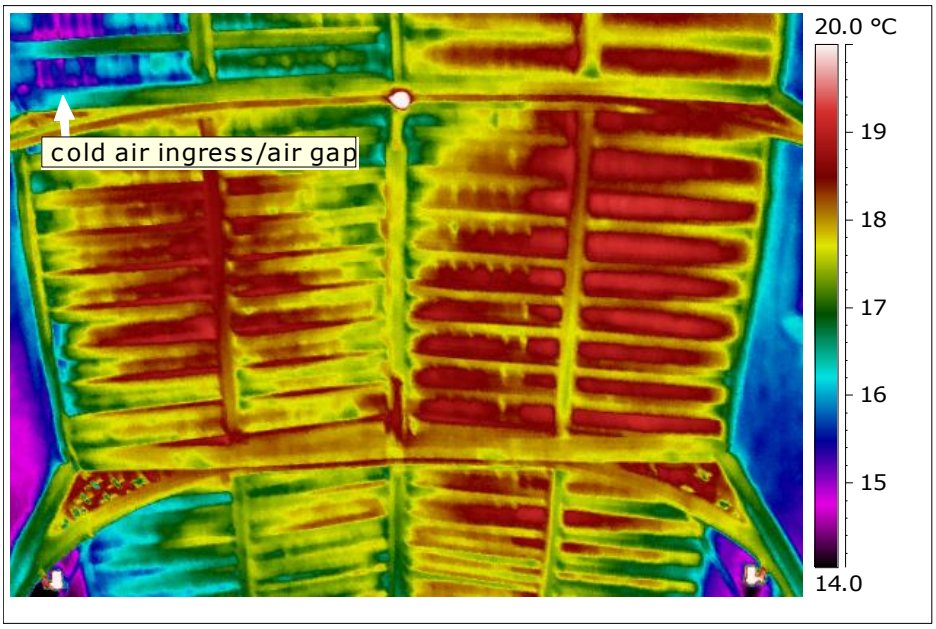


Image 15. Location: Church Centre Roof Section – Capture facing Front/East



Isotherm. Highlights the thermal anomaly consistent with cold air ingress.

Comment: The Thermal Image shows a section of roof which appears slightly warmer than the other section but this is a minimal DeltaT and probably caused by the heating radiator directly below. The white square does indicate a cold thermal anomaly and the thermal pattern is consistent with cold air ingress. This air gap may allow water to ingress during wet weather. See also following image for a closer view.
Further investigation required.



Isotherm. Highlights the thermal anomaly consistent with cold air ingress.

Image 16. Location: Church Centre Roof Section.
Comment: see previous image for comment.

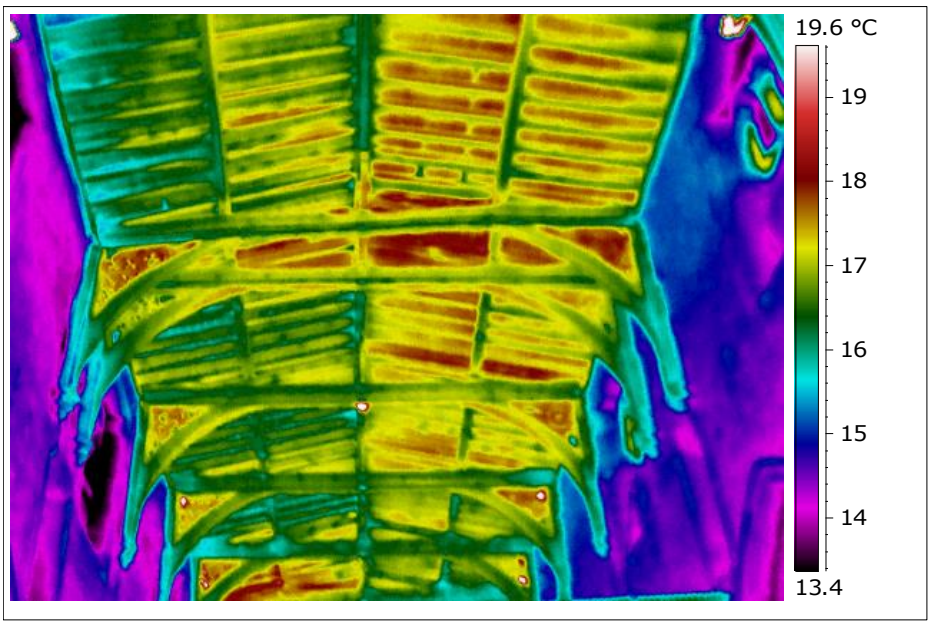


Image 17. Location: Church Centre Roof Section.
Comment: The Thermal Image is a continuation from the previous image. No adverse thermal anomalies can be seen.

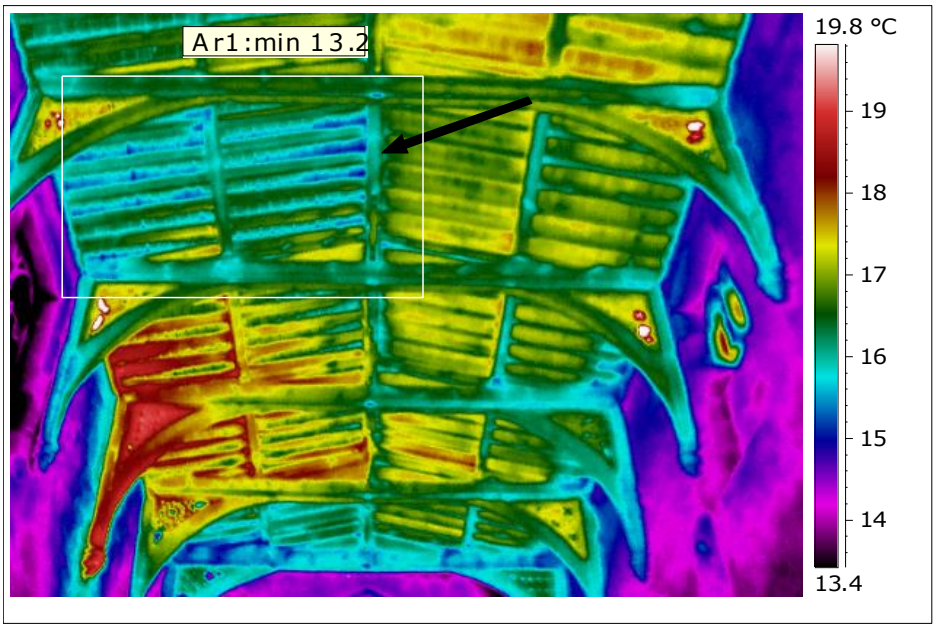


Image 18. Location: Church Centre Roof Section. Captured towards front/East
Comment: The thermogram shows this roof section with a cold thermal anomaly consistent with cold air ingress. This may allow water to ingress during wet weather. See following thermogram for closer view.
Further investigation required.

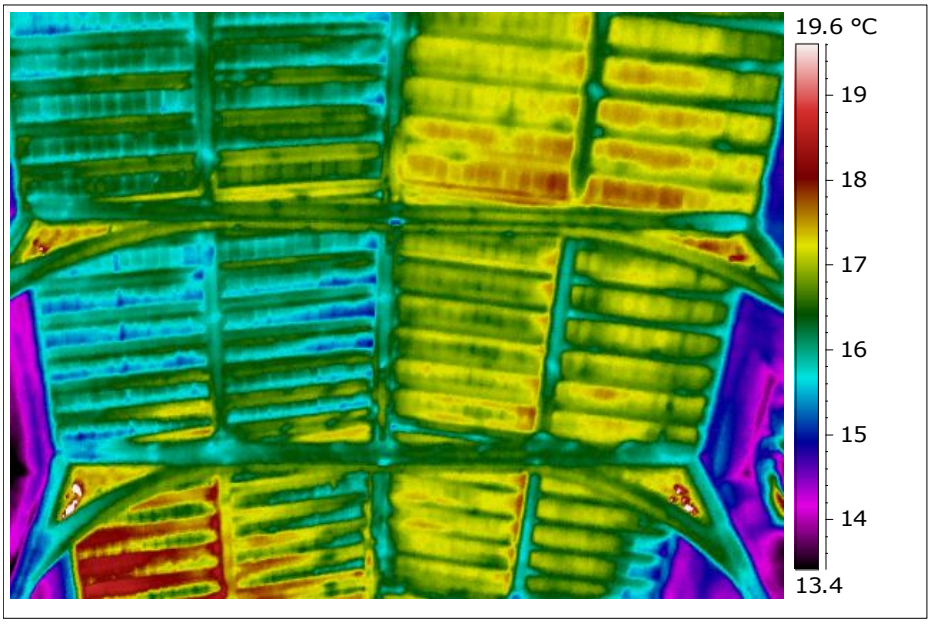


Image 19. Location: Church Centre Roof Section. Front/East Elevation.
Comment: Closer view. See above image for comment.

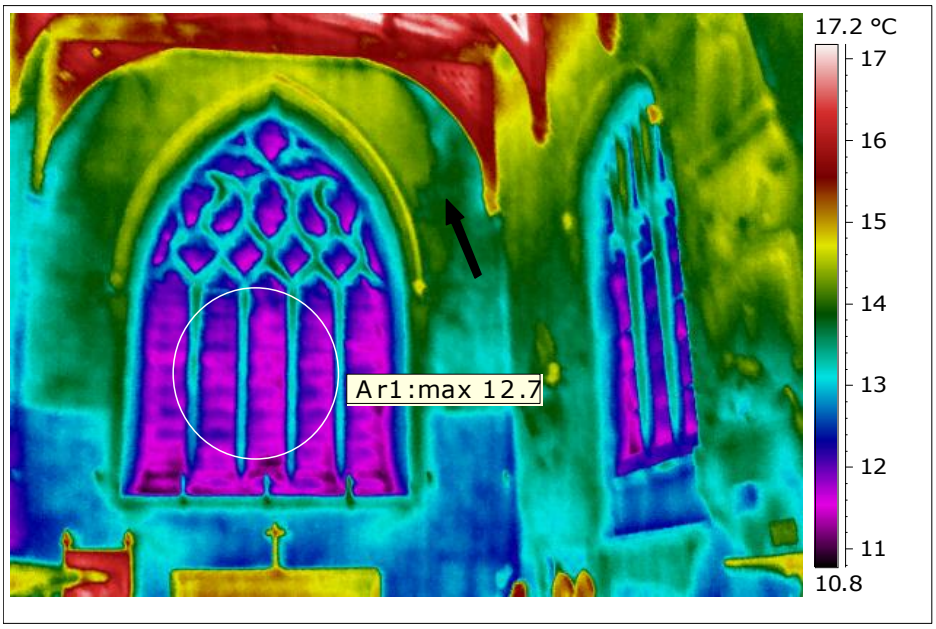


Image 20. Location: Church Centre. Front/East Elevation.

Comment: The thermogram shows that the maximum temperature on the window surface is approximately the same as the temperature recorded on the outside and shows the cold thermal bridge created by the single glazing. The arrow is indicating towards a changing thermal pattern, possibly caused by different building materials, different thermal properties, historical repairs. No adverse thermal anomalies.

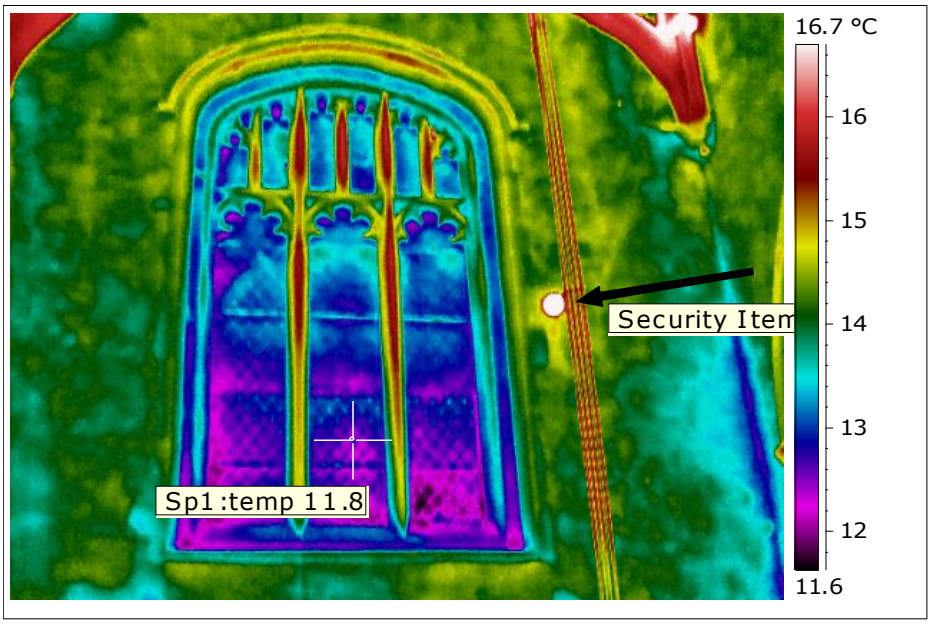
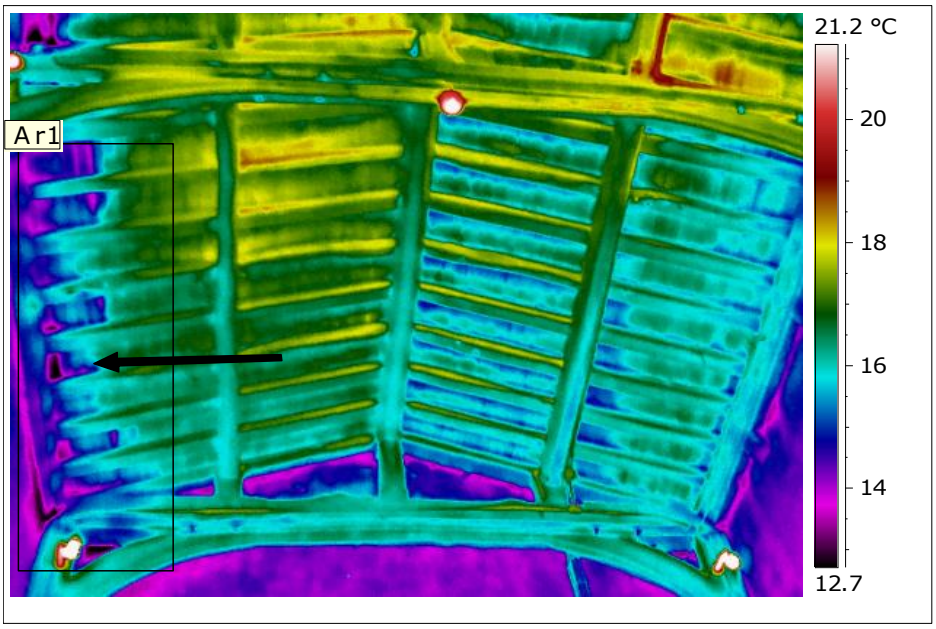


Image 21. Location: Rear of Church – East Chapel – West Elevation - Nr Main Entrance.

Comment: The thermogram shows that the maximum temperature on the window surface is approximately the same as the temperature recorded on the outside and shows the cold thermal bridge created by the single glazing. No adverse thermal anomalies.



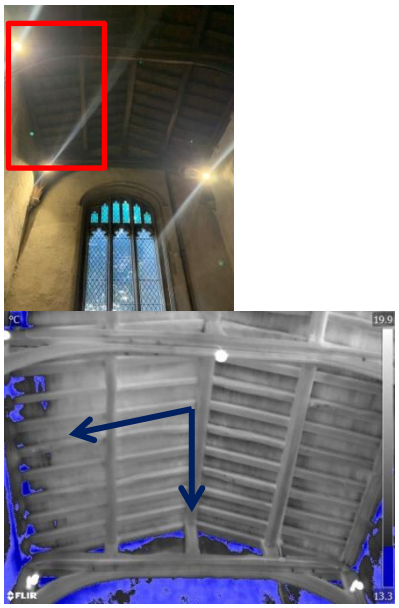


Image 22. Location: Rear of Church – South Chapel – West Elevation - Nr Main Entrance.

Isotherm. Highlights the thermal anomaly consistent with cold air ingress

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Comment: The roof section near the adjoining wall shows many cold thermal anomalies consistent with cold air ingress. The arrow is indicating an anomaly that may be an air gap or moisture ingress. See also following image. Further investigation required.

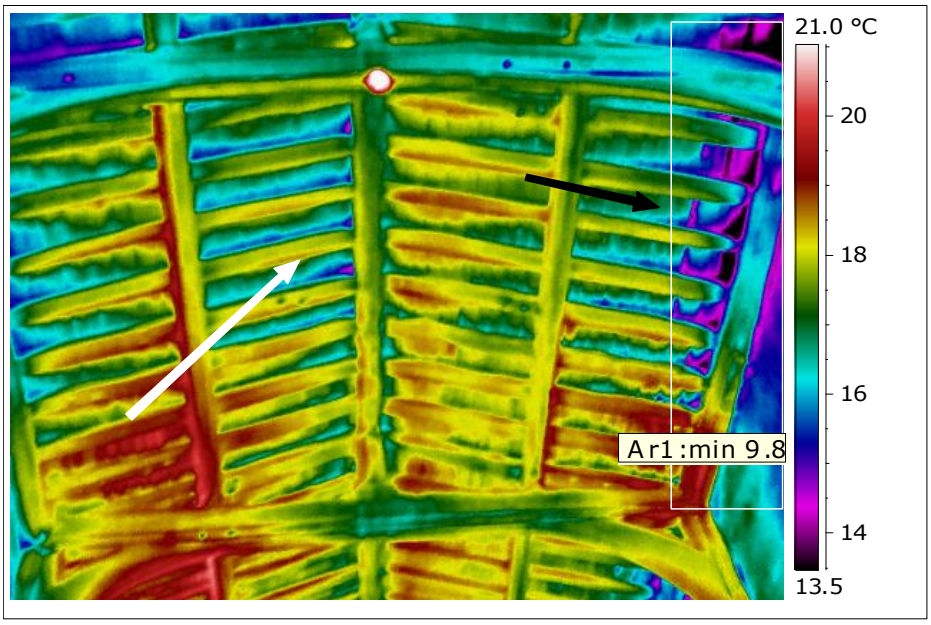
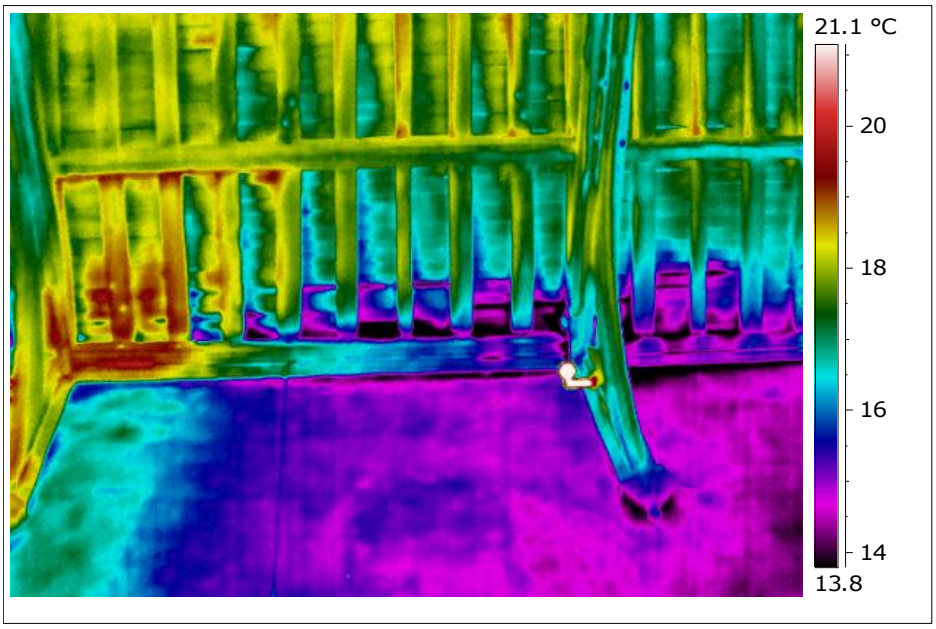
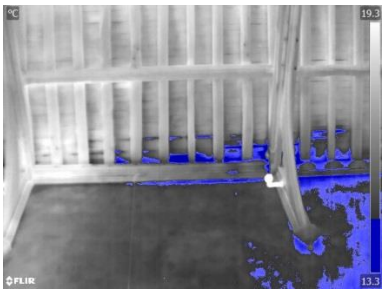


Image 23. Location: Rear of Church – South Elevation – Above Main Entrance.

Comment: The Thermal Image is a continuation of the previous image and highlights the cold thermal anomaly at the wall/roof junction. The white arrow is also indicating areas of suspected cold air ingress.
Further investigation required.





Isotherm. Highlights the thermal anomaly consistent with cold air ingress

Image 24. Location: Rear of Church – South Elevation – Above Main Entrance.
Comment: The Thermal Image is another continuation of the previous images and highlights the cold thermal anomaly at the wall/roof junction, consistent with cold air ingress/air movement.
Further investigation required.

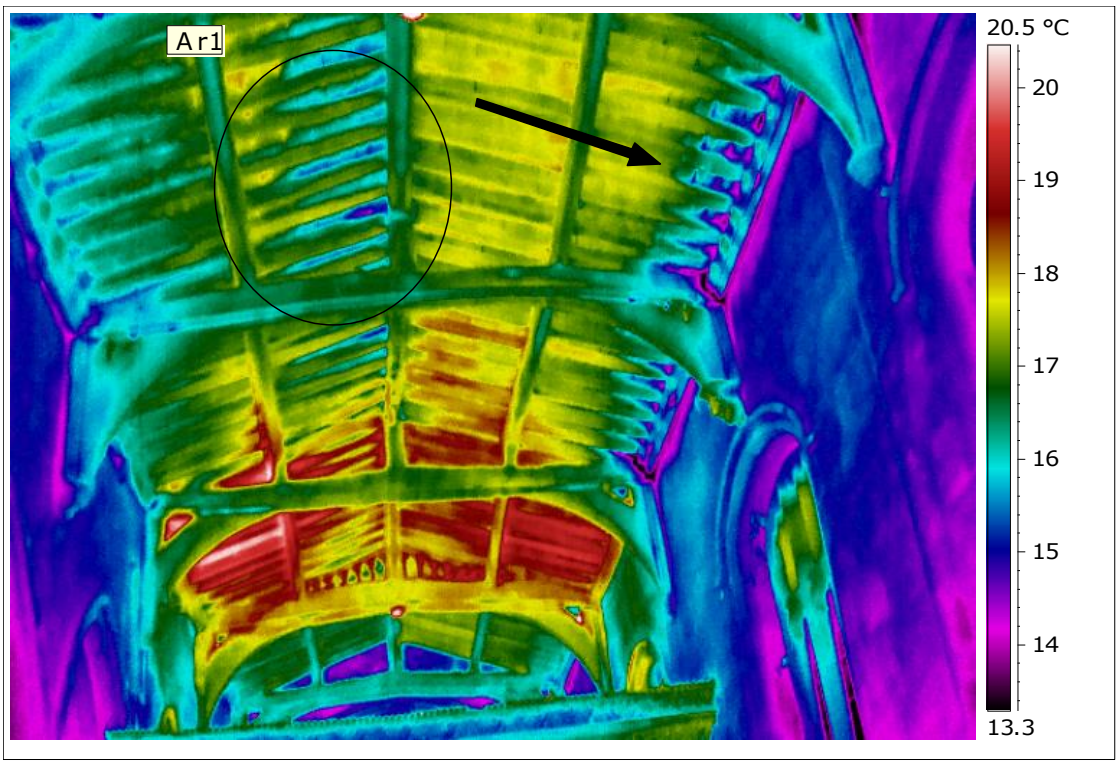
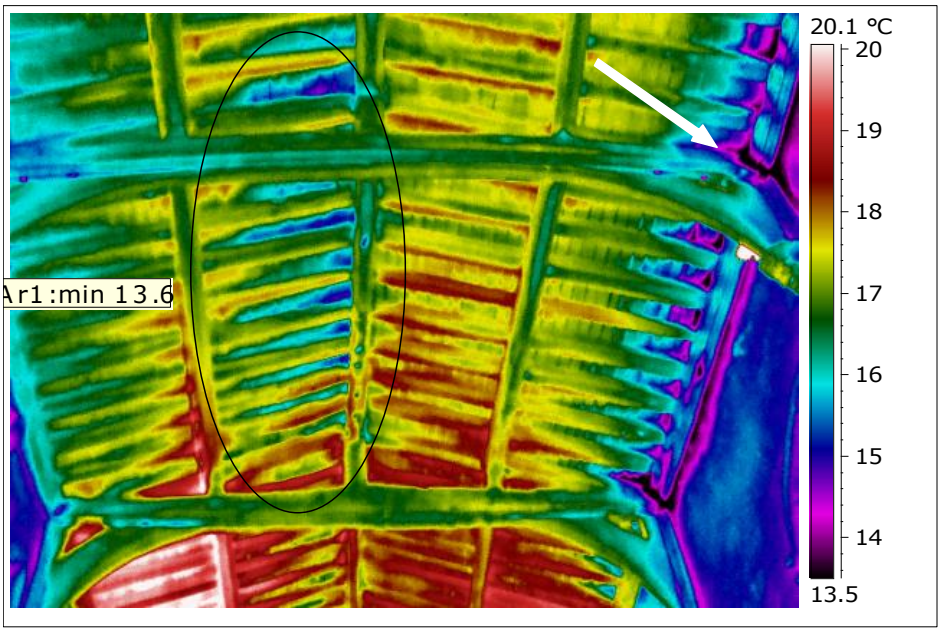
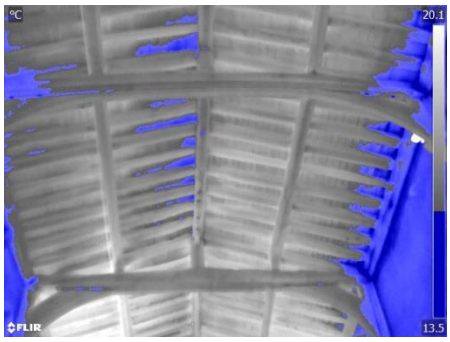


Image 25. Location: South Chapel – Captured looking Forward/East.
Comment: The Thermal Image is showing further cold thermal anomalies on this roof section. Consistent with air gaps and cold air ingress. See following image for closer view.
Further investigation required.





Isotherm. Highlights the thermal anomaly consistent with cold air ingress

Image 26. Location: Church Centre - **South Chapel – Captured looking Forward/East.**
Comment: The Thermal image is a closer view of the thermal anomalies as highlighted in the previous image. Further investigation required.

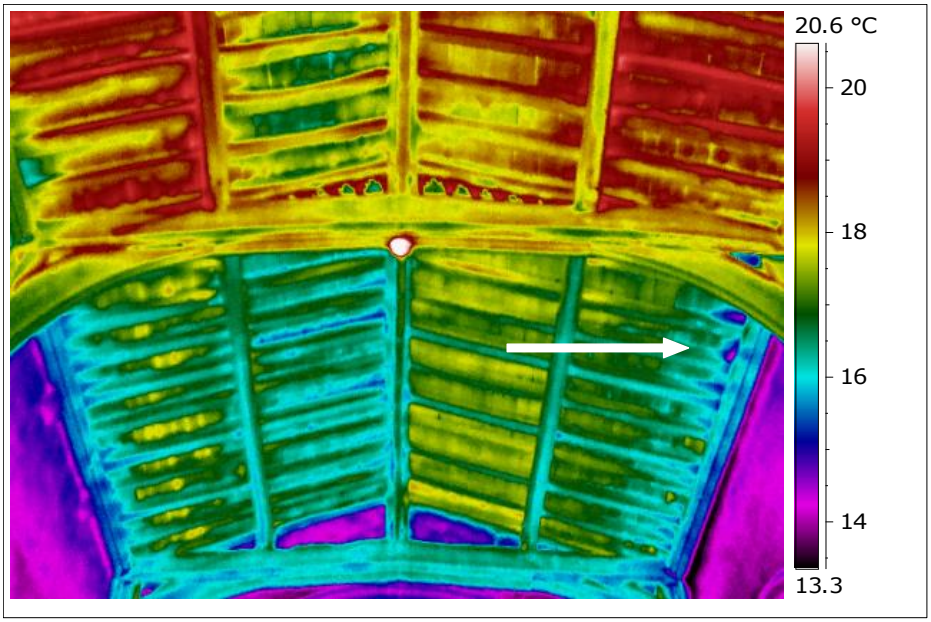


Image 27. Location: South Chapel of Church – Front/East.
Comment: The Thermal Image shows this front section of roof. A few small cold anomalies can be seen at the wall/roof junction on the right side.

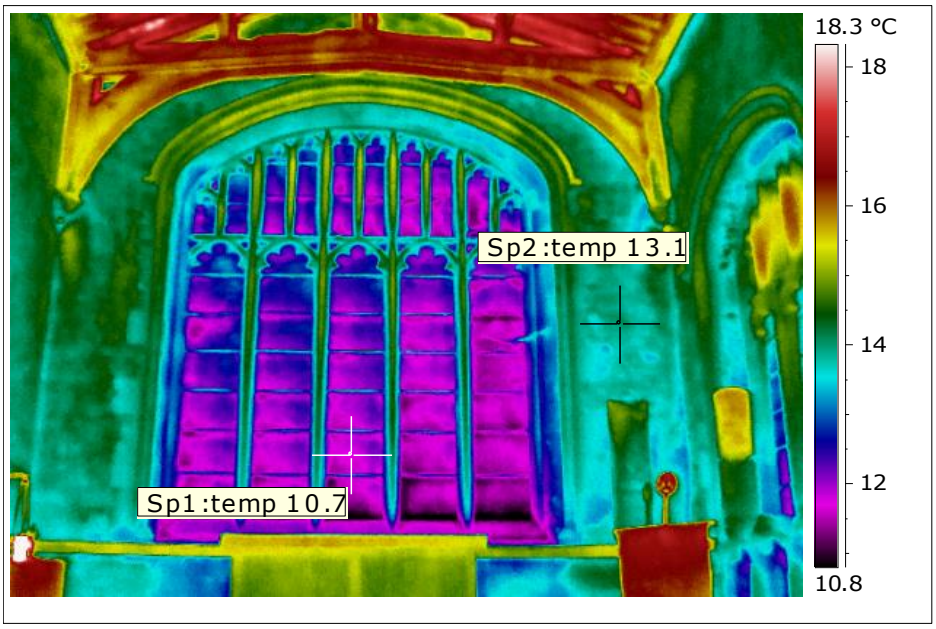


Image 28. Location: South Chapel – Front of Church – East Elevation
Comment: The thermogram shows that the maximum temperature on the internal window surfaces are approximately the same as the temperature recorded on the external surfaces. The dark colours appear colder when compared to the external images but this is due to all other surfaces, internally, being much warmer, recorded at approximately 13°C

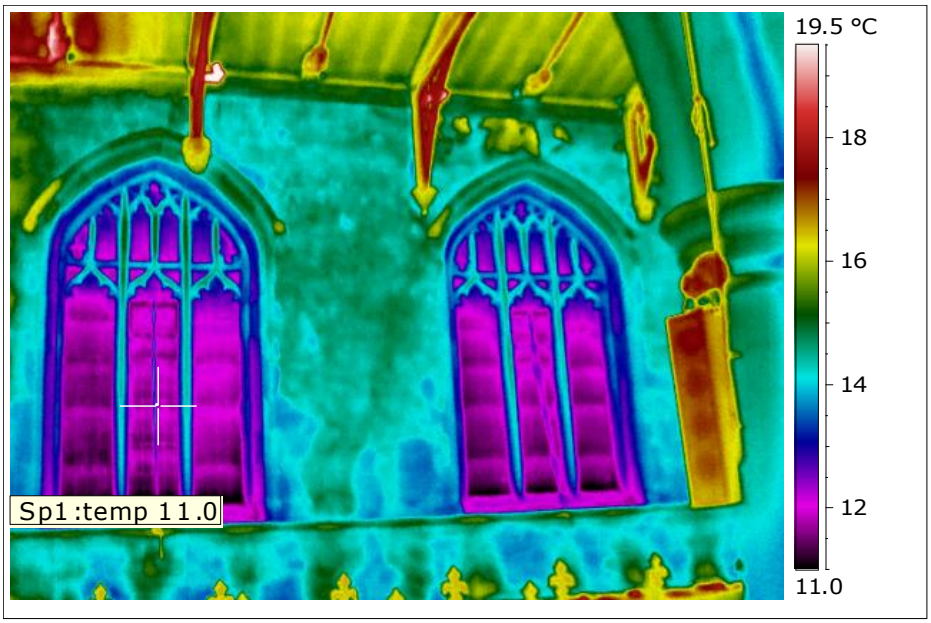


Image 29. Location: North Elevation Windows – Rear.
Comment: The thermogram shows that the maximum temperature on the window surface is approximately the same as the temperature recorded on the outside. These temperatures and thermal patterns were consistent at all window installations. See following images 29 – 26.

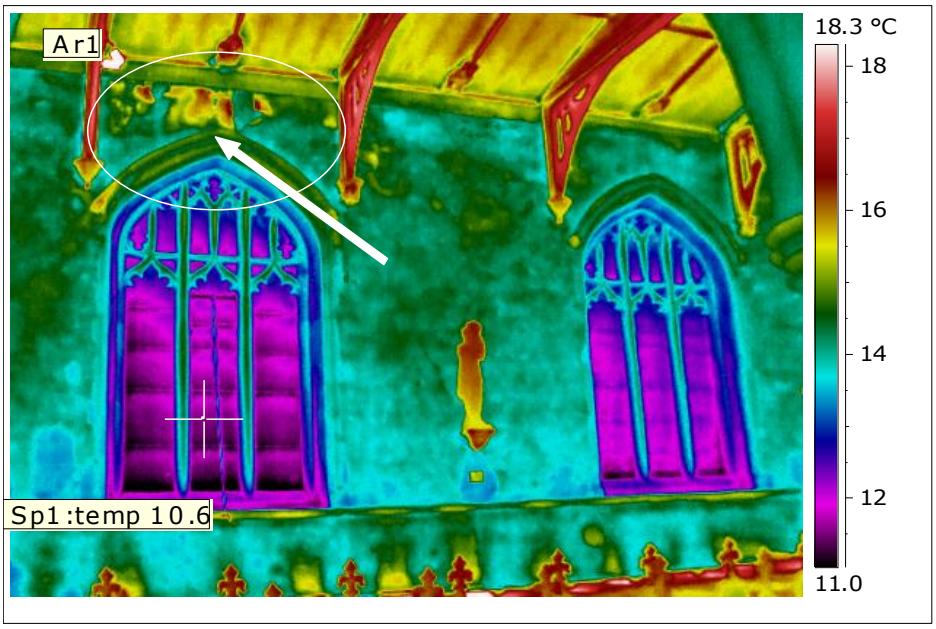


Image 30. Location: North Elevation Windows – Centre.
See previous comment on windows.
The arrow is showing a warm thermal anomaly. The close-up visual image shows signs of peeling paint.
Further investigation for moisture ingress or condensation problems.

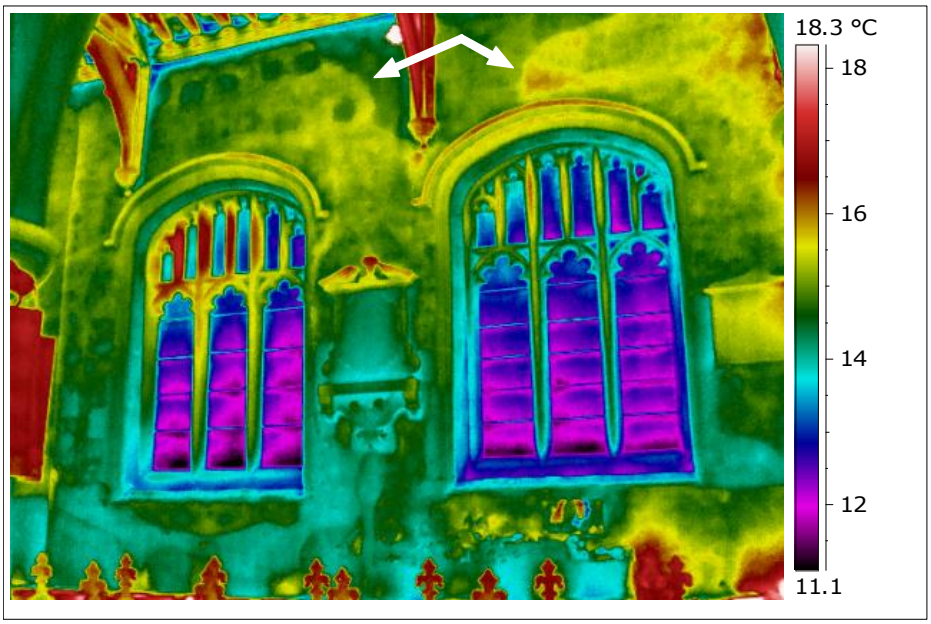


Image 31. Location: South Elevation Windows – Rear, Nr Main Entrance.
Comment: The Thermal Image The white arrows are indicating differing thermal patterns, temperature differences, possibly caused by different building materials with different thermal properties, historical repairs. These anomalies may also be air gaps within the plaster that can cause the plaster and paint to peel as in the image above, image 23.

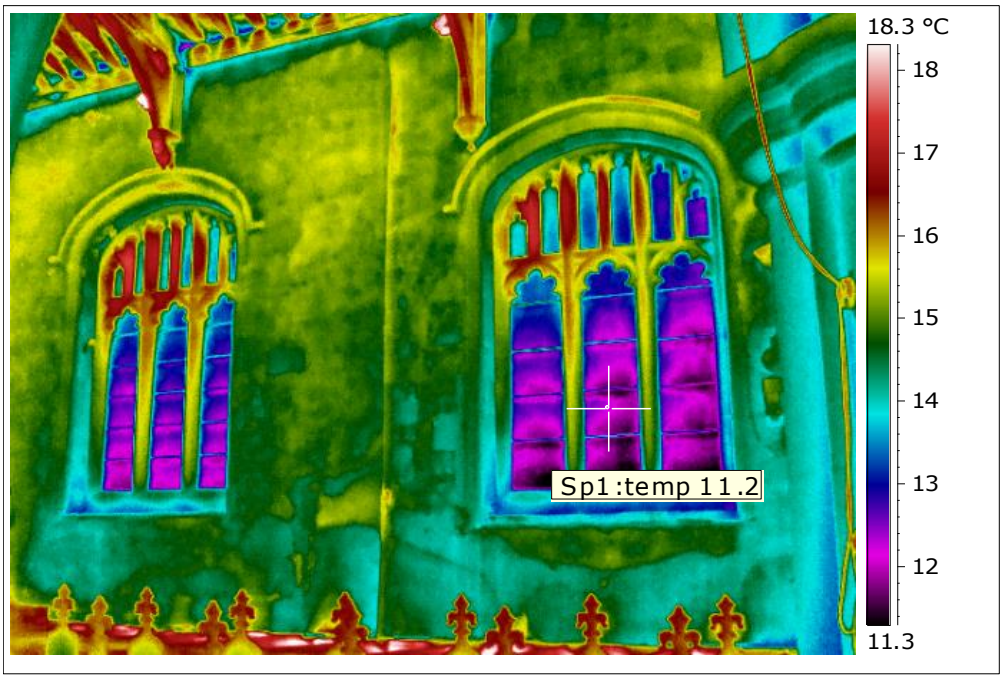


Image 32. Location: South Elevation Windows – Centre.

Comment: These Thermograms are included to show the consistent thermal patterns and temperatures on all window installations are consistent and show the same temperatures on the internal and external sides. This may change slightly due to the location of the heating radiators.

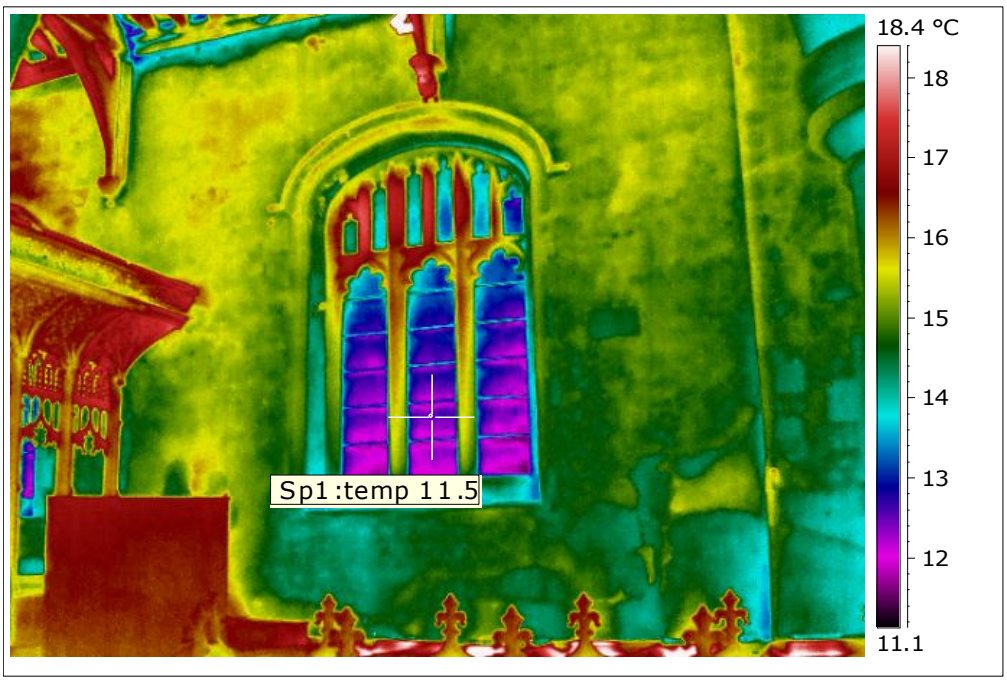
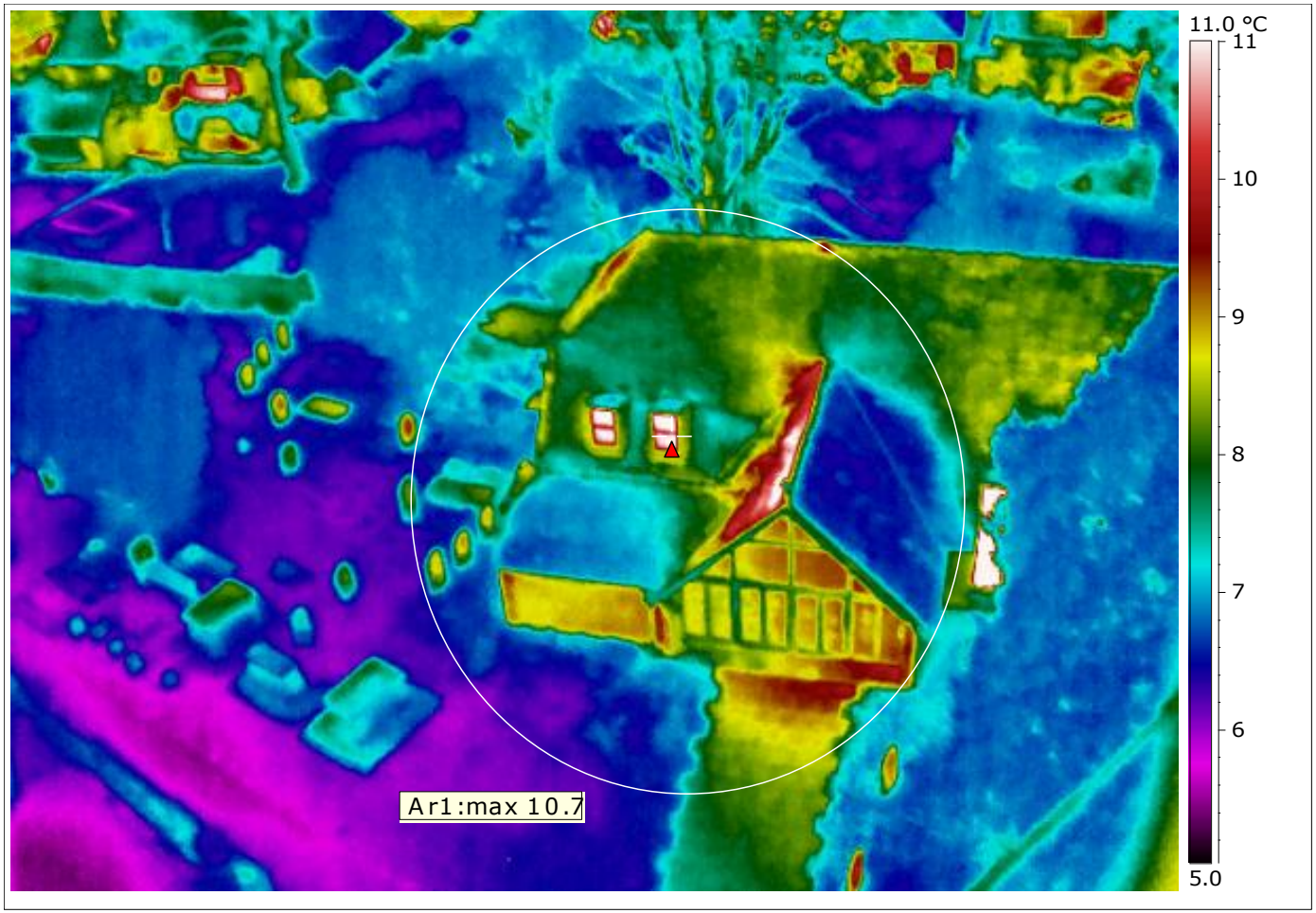


Image 33. Location: South Elevation Windows – Front of Church
Comment: Thermogram shown for reference only. See comment above.



Atmospheric Temp	7.0 °C
Ar1 Area Max. Temp	10.7 °C

Image 34. Location. Church Hall – Aerial View – Captured from the Bell Tower.

Comment: The thermal image was taken to show the elevated temperature anomalies on the various facades and roof surface of the Church Hall. These warm anomalies are consistent with energy loss due to low levels of insulation. Internal images included in this report will show that these anomalies are located close to heating sources. The windows are also bridging warm temperature, energy loss. The recorded high temperature is 17°C, 10°C above the current atmospheric temperature.

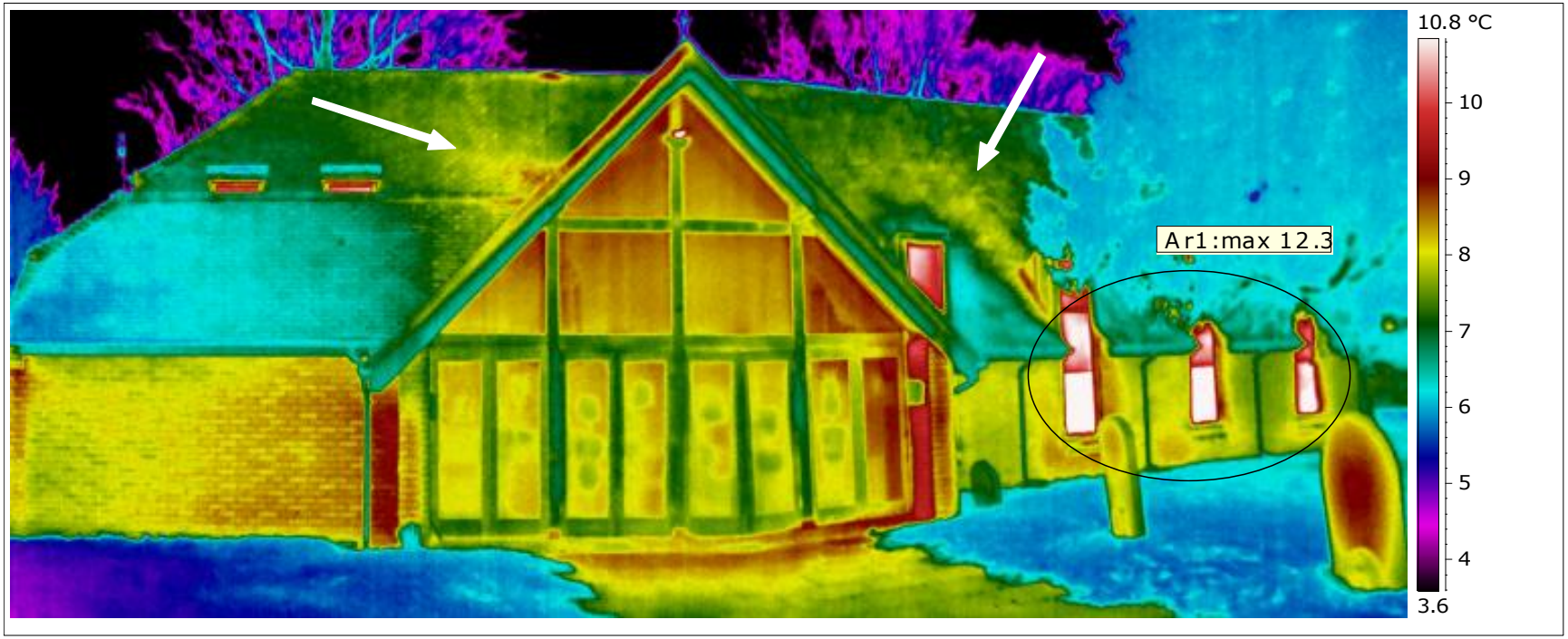


Image 35. Location. Church Hall – Main Entrance.

Comment: The thermal image was taken to show the warm thermal anomalies on the roof surface and the window units. The main entrance, door insulation does not show any adverse thermal anomalies. The glazed units record a surface temperature of 12°C which is approximately 7°C above the current atmospheric temperature of 5°C. Further investigation required.

Atmospheric Temp	5.0 °C
Ar1 Area Max. Temp	12.3 °C

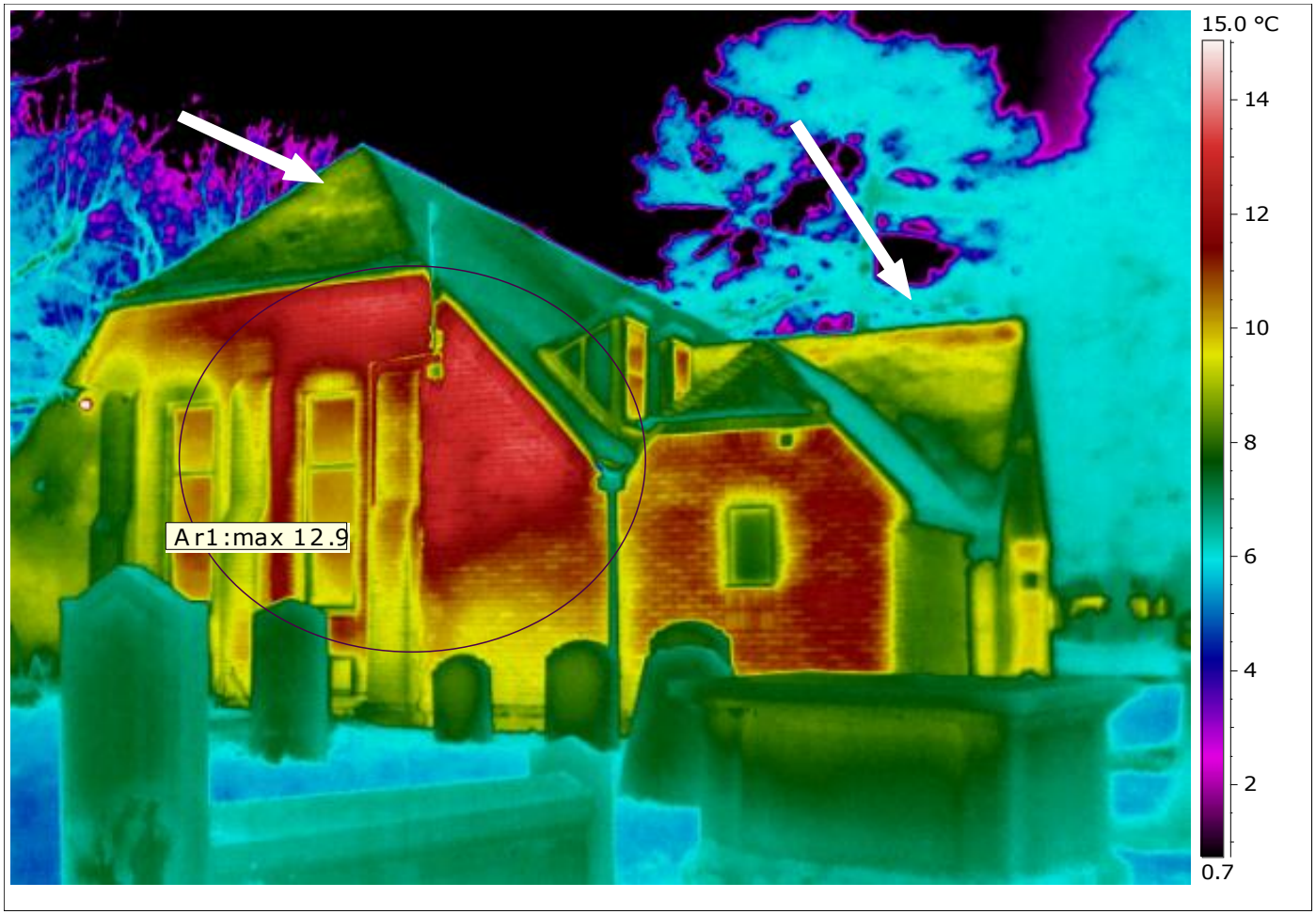


Image 36. Location. Church Hall – West Elevation – WC's and Small Hall

Comment: The thermal image was taken to show the warm thermal anomaly on this elevation, particularly on the upper floor, small hall. This warm thermal pattern is consistent with energy loss due to low insulation levels or direct, internal, localised heating sources. The white arrows are indicating warm thermal anomalies on the roof surface. Further investigation required.

THERMAL INVESTIGATION.

St Marys Church Hall

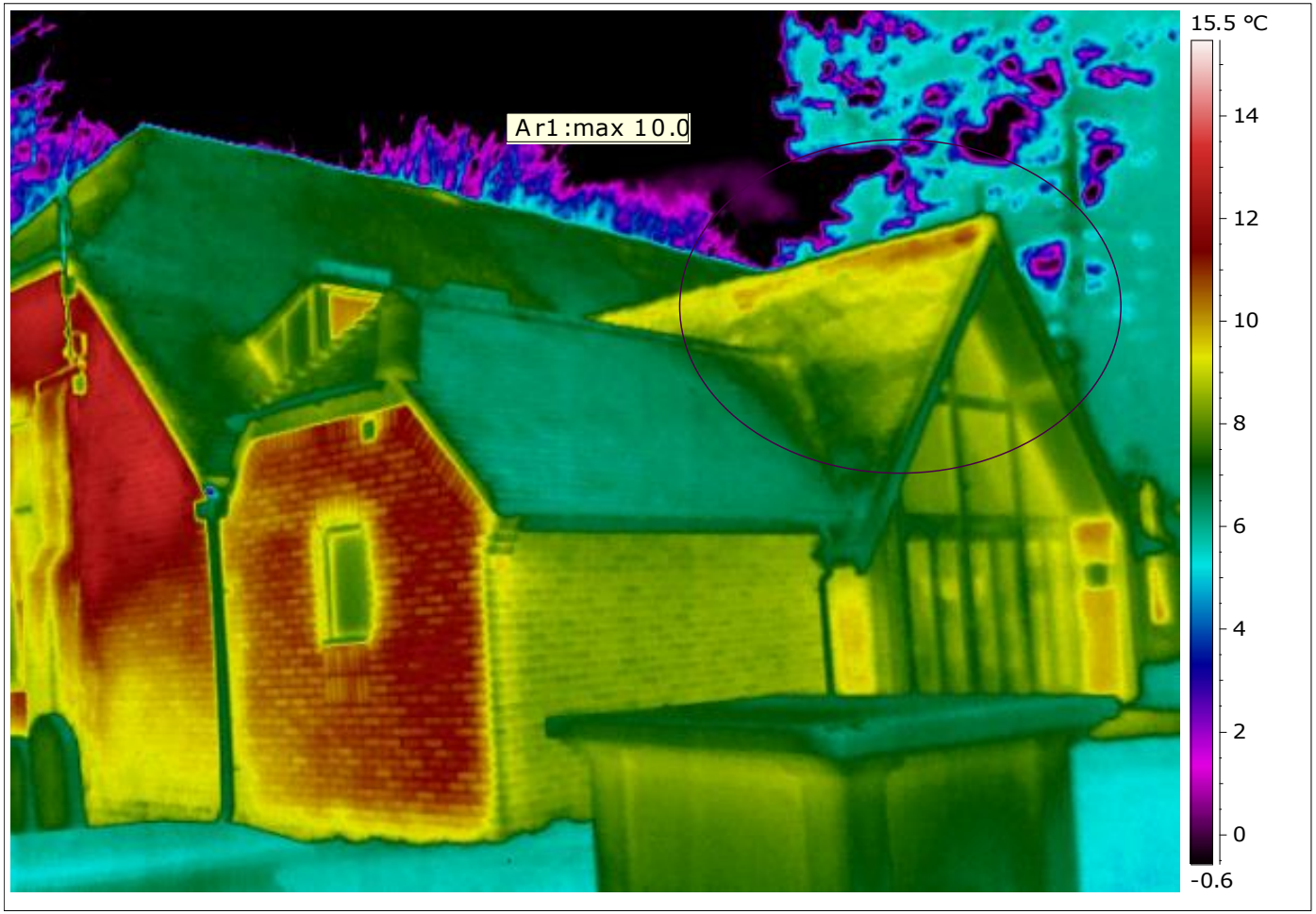
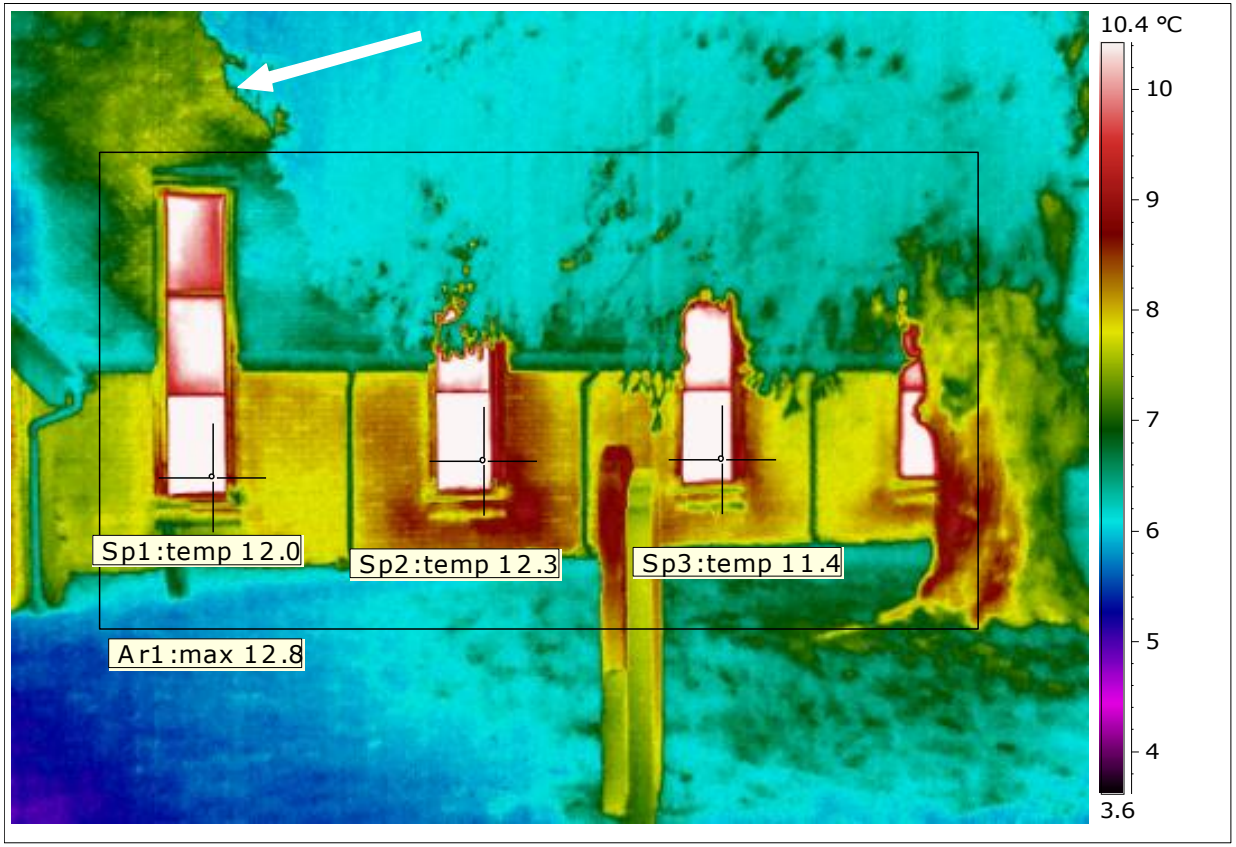


Image 37. Location. Church Hall – West/Front Elevation.

Comment: The thermal image was taken to show the warm thermal anomaly on the roof section above the main entrance, circled.
Check the insulation levels.
Further investigation required



Atmospheric Temp	-0.0 °C
Ar1 Area Max. Temp	12.8 °C
Sp1 Glass Temp	12.0 °C
Sp2 Temperature	12.3 °C
Sp3 Temperature	11.4 °C

Image 38. Location. RHS of Main Entrance.

Comment: The thermal image was taken to show the elevated temperatures on the glazed window surfaces, approximately 12°C. The white arrow is indicating a warm thermal anomaly on the roof surface. Most of this roof surface was hidden by the tree and could not be imaged from the ground level.

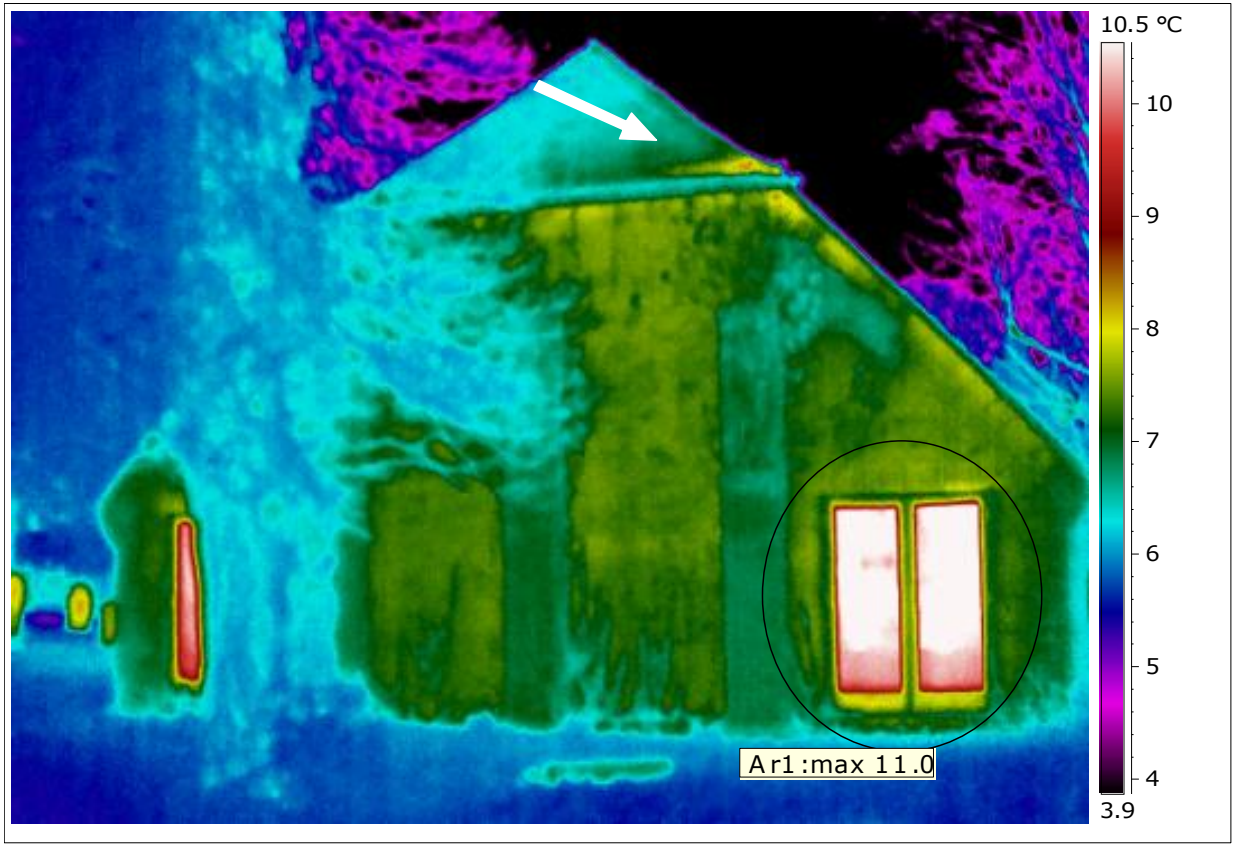
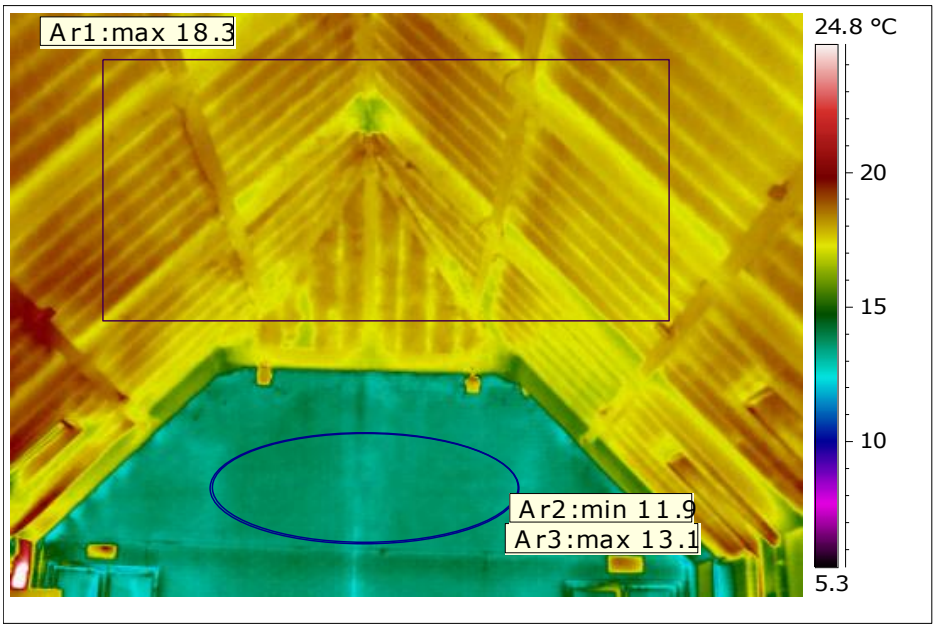


Image 39. Location. Church Hall – East/RHS Elevation.

Comment: The thermal image was taken to show the elevated temperatures on the glazed window surfaces, approximately 11°C which is consistent with all other window installation in this building. The white arrow is indicating a small warm air gap on the corner of this roof section.



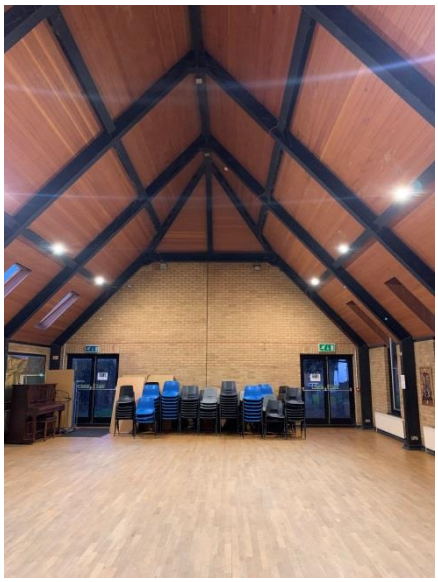


Image 40. Location: Main Hall – East Wall and Roof Space
Comment: The Thermal Image is taken to show a uniform temperature across the roof surface with no adverse thermal. The wall has a much lower temperature of around 14°C where the room has been heated to approximately 21°C.

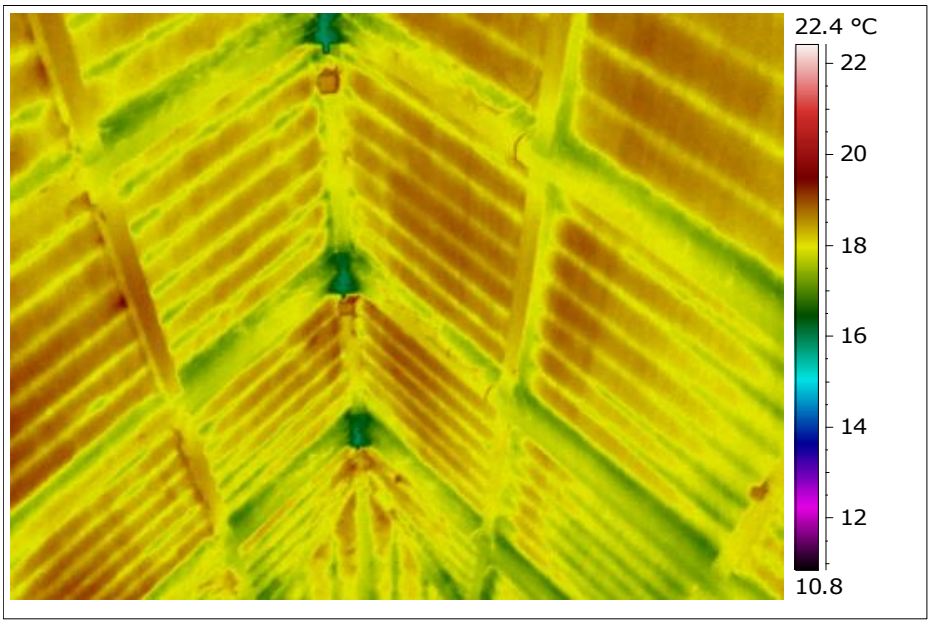
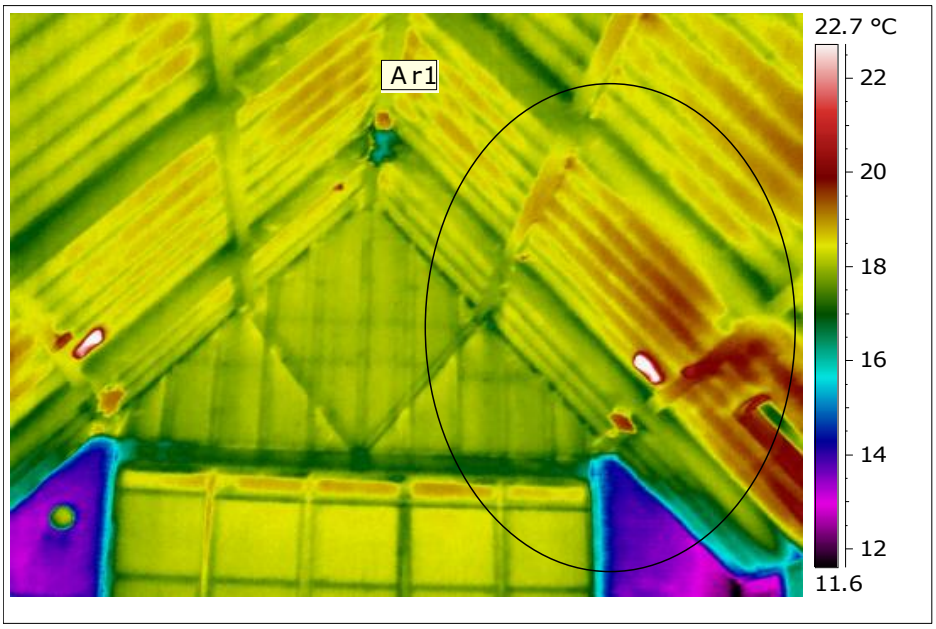


Image 41. Location: Main Hall – Central Roof Section.
Comment: The Thermal Image is a continuation of the previous image and shows a uniform temperature across the roof surface. No adverse thermal anomalies.



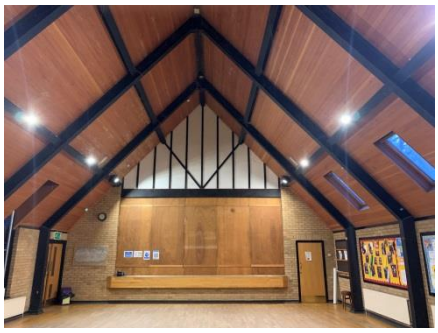
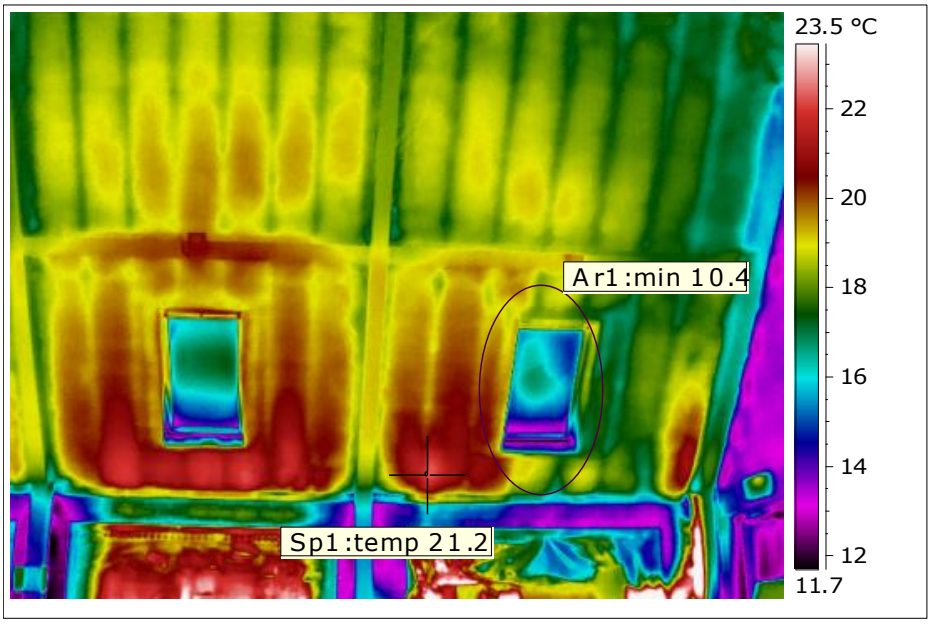


Image 42. Location: Main Hall –West Roof Section.
Comment: The Thermal Image shows no adverse thermal anomalies. Warmer sections can be seen above the radiator positions, circled.



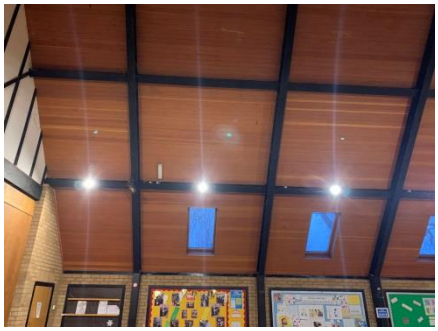


Image 43. Location: Main hall – Rear Wall/Roof - Left
Comment: The Thermal Image shows the elevated temperatures on the roof surface as these areas are in directly above the radiator positions. This temperature can be seen at the same areas on the external thermograms. Higher levels of insulation may be considered to avoid energy loss.
The window installations show cold thermal anomalies consistent with cold air ingress and record a temperature of 10.4°C around these installations.
Further investigation required.

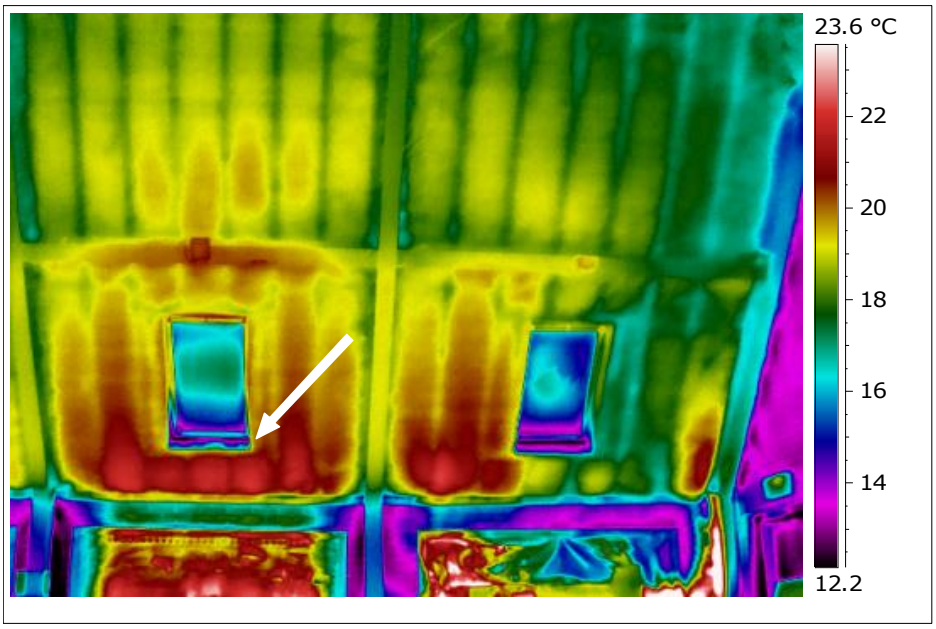
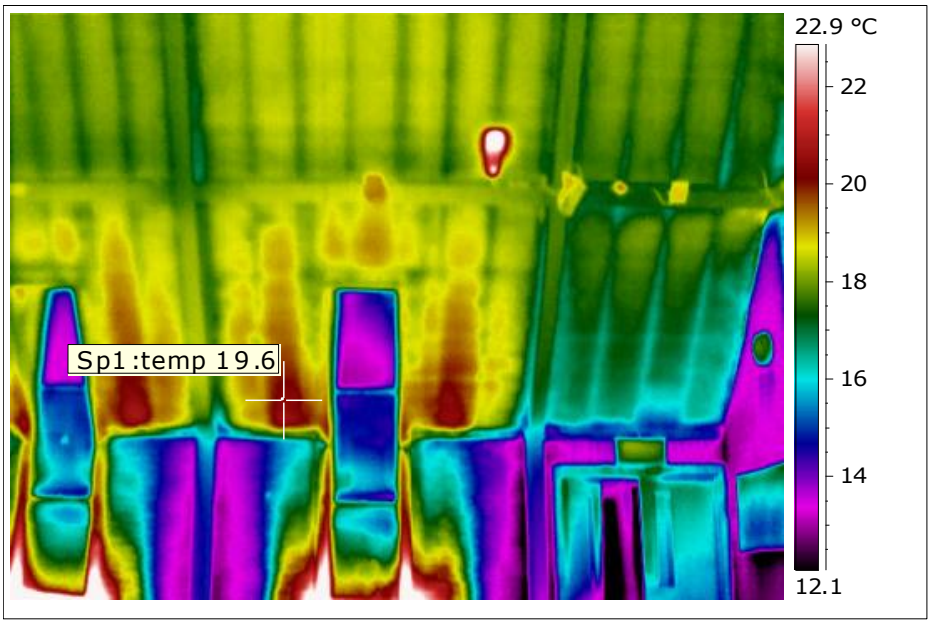


Image 44. Location: Main Hall – Rear Wall/Roof - Right
Comment: The Thermal Image shows the same thermal anomalies as the previous image. The arrow indicates a cold thermal anomaly consistent with air ingress or cold air movement.
Further investigation required.



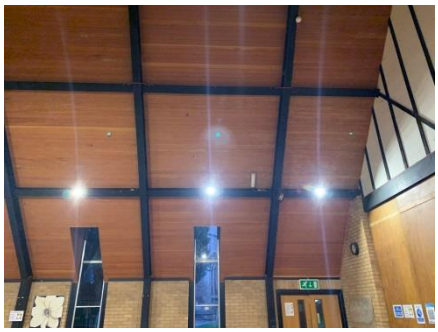


Image 45. Location: Main Hall – Front Wall – Nr Entrance Doorway.
Comment: The Thermal Image shows the elevated temperatures on the wall and ceiling surfaces convected from the radiators below in this area. These radiators are also heating the glazed surfaces and can be seen on the thermograms captured externally.

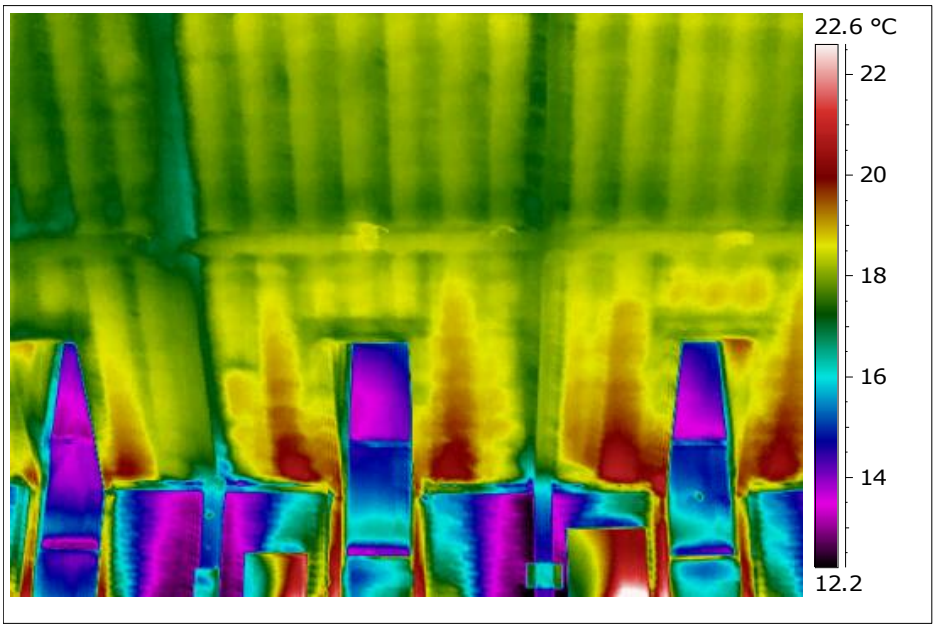
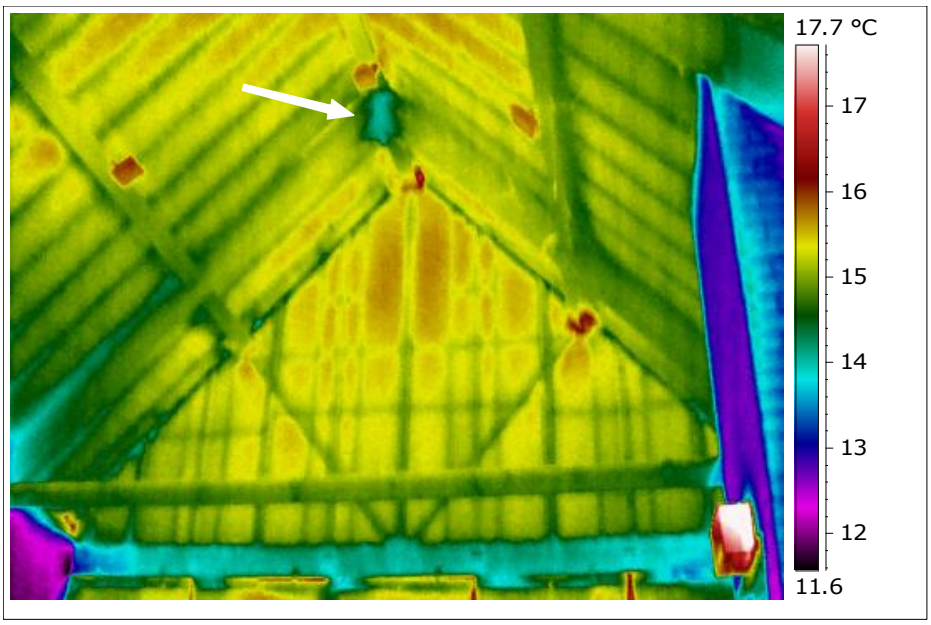


Image 46. Location: Main Hall – Front Wall – Left side.
Comment: The Thermal Image is a continuation from the previous image and shows the same thermal patterns.



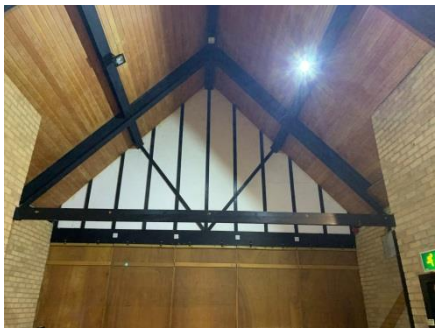
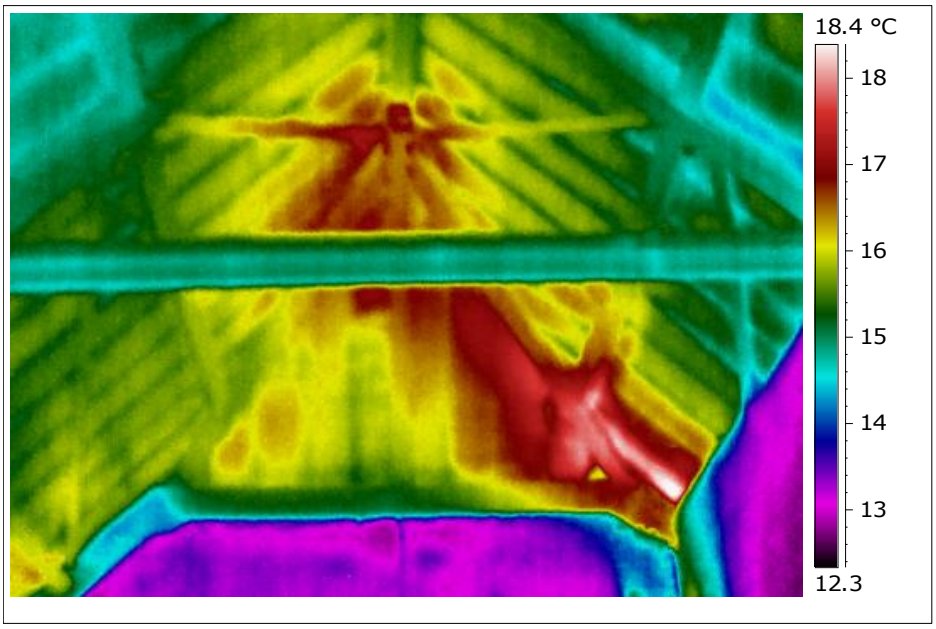


Image 47. Location: Church Hall - Small Hall/Lounge – Party Wall to Main Hall
Comment: The Thermal Image shows no adverse thermal anomalies in this area with a uniform temperature across the high wall and the roof surface. The arrow is indicating a small cold anomaly but this is thought to be a metal fixing on the roof beams.



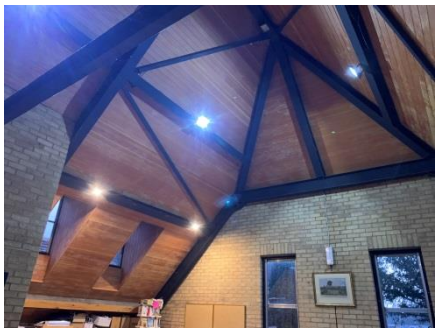


Image 48. Location: Church Hall – Small Hall/Lounge – Roof
Comment: The Thermal Image shows a warm thermal anomaly which appears to be emanating from a nearby heat source near the kitchen area. This thermal pattern can be seen on the external thermograms.
Further investigation required.

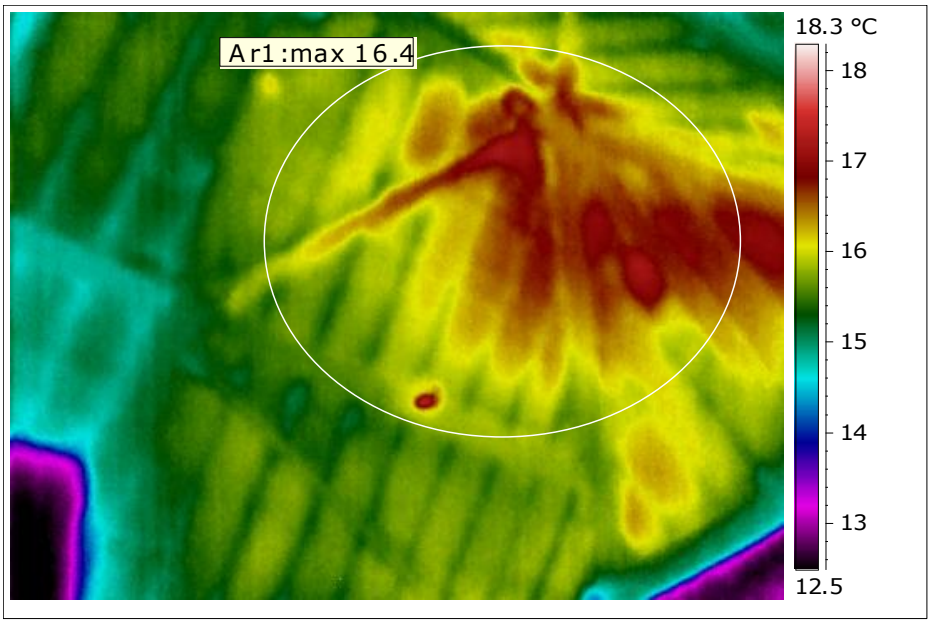


Image 49. Location: Church Hall – Small Hall/Lounge – Roof
Comment: The Thermal Image is a continuation of the previous thermogram and shows the warm thermal anomaly which is covering most of the roof surface in this area. Thought to be emanating from a heat source near the kitchen. This should be considered as energy loss as this can be seen on the external images.
Further investigation required.

Stanburys Ltd

estate management solutions

Tel: 01462 894144 Email: enquiries@stanburys.com

Fax: 01462 894993 Web: www.stanburys.com

IPEC House, 25 Church Street

Baldock, Hertfordshire

SG7 5AF

Insulation Assessment

Introduction

In March 2021 the PCC instructed Stanburys Ltd to complete a Thermal Survey of the Church and Church Hall. The purpose was to investigate any evidence of air leakage, missing/damaged insulation, thermal bridging or glazing issues at St Marys Church and Church Hall. The requirements of this survey were to identify areas where heat loss is taking place and where energy is being wasted; these areas may also allow moisture to ingress.

Interpretation of Survey

Our interpretation of the thermal survey (which was corroborated by a meeting with the engineer who prepared it) was that although some heat is lost through the roof it is not nearly as much as we were expecting and fairly negligible compared to heat loss through windows. It appears the roof whilst still losing some heat, insulates fairly well.

If we were to insulate it would only be the central aisle as the south is already releaded. We have also been advised that we need to keep some of the nave and chancel clerestory window lights open to promote air circulation and reduce dampness. This means that there is not a huge difference between the internal and external temperature of the roof so we feel roof insulation would be a false economy.

Technical Observations

If we were to insulate the roof, since lead is the proposed roof covering, it would require ventilation to the underside of the lead. This would require raising the profile of the roof. This would require careful detailing around the Nave – Tower abutment and the eastern end of the Chancel where it meets the parapet upstand. The north and south perimeter details would be easier to accommodate due to the gutter / parapet gutter upstands

The insulation material would require careful selection to ensure a breathable insulation material (e.g. Lambs Wool) is provided to minimise cold bridging / condensation issues and deterioration to the fabric. This would require significant depth to provide meaningful thermal benefit and be suitably protected to prevent entry by vermin and bats. Bats are known to use the Church Tower.

The provision of insulation may require planning consent, due to the increased pitch. The Nave roof is not immediately visible from ground level due to the presence of the aisles and ground levels surrounding the Church. The Chancel roof is wholly concealed by parapets.

Financial Impact

A detailed cost assessment has not been completed but indicatively the cost would be well into 5 figures and would not have a demonstrably large reduction to our carbon footprint.

We would rather spend money on secondary glazing protection for the windows.

We realise that this is a once in a lifetime opportunity to insulate the roof but if we do, we would be highly unlikely to be in a position to do anything to the windows for some considerable time and as demonstrated by the thermal survey and air circulation within the Nave any insulation would not have a significant impact on overall energy losses as compared to improvements to the glazing.

Emma Critchley

From: Philippa Gould <preed@barker-associates.co.uk>
Sent: 10 August 2021 08:44
To: Emma Critchley
Cc: Andrew Holford (2008luddite@googlemail.com)
Subject: P17-034 - St Mary, Baldock - Nave & Chancel Roof

Dear Emma,

We have received the heat loss calculations from ESOS-Energy – details below. And a response about the roof ventilation detail.

Energy Costs

The PCC have estimated their energy costs (this is an interpolation as meters have been changed to serve only the Church / covid restrictions) but the best estimate is approximately £2,000/year to heat the Church.

Energy Savings

At this stage they have only run calculations for the proposed roofing upgrade. The calculations indicate an energy saving of 11.7%. This gives an energy saving of £234/year by providing the insulation.

Insulation Costs

A contractor's cost has not been obtained for the provision of new insulation but a budget estimate below includes new boarding to support the leadwork over the new insulation. This *excludes* an allowance for adjustments to the flint work around the tower abutment that would be required as a result of the increased roof height.

Assuming a total roof area of 40m x 8m = 320sqm				
Element	**Rate**	**Unit**	**Quantity**	**Total Cost**
Supply & Install sheeps wool insulation	6.5	sqm	320	2,080
Supply and install timber battens	800	item	1	800
Supply & Install timber boarding	25	sqm	320	8,000
			TOTAL COST	**£10,880**
Payback Period with £234/year saving			**PAYBACK PERIOD**	47 years

Conclusion

Whilst a good long-term solution for improving the thermal characteristics of the Church the PCC still consider putting the estimated £11,000 (excluding works to alter to the Tower, fees and VAT) cost towards secondary glazing in the future and the unquantifiable affect of installing the insulation on the equilibrium of the roofing timbers for such a marginal gain.

Although energy savings have not been calculated at this time for the secondary glazing the heat loss survey indicates significantly more heat is lost via the windows.

Roof Ventilation Detail

This detail will be omitted (this will be reflected in updated documents to be issued to the DAC in due course) the current roof does not have one and as noted this will increase heat losses.

Kind regards,

Philippa Gould MEng(Hons) MRICS | Associate | Barker Associates | DDI +44 (0)1279 648051 | www.barker-associates.co.uk |

Please note my working week is Tuesday, Wednesday and Thursday.

Emma Critchley

From: Philippa Gould <preed@barker-associates.co.uk>
Sent: 18 May 2021 16:58
To: Emma Critchley
Cc: Andrew Holford (2008luddite@googlemail.com); Peter Joslin (pwjoslin@hotmail.co.uk); Paul Dougal; Joanna Chandler
Subject: RE: P17-034 - St Mary, Baldock - Nave & Chancel Roof

Dear Emma,

Please see responses below in RED.

Philippa Gould MEng(Hons) MRICS | Associate | Barker Associates | DDI +44 (0)1279 648051 | www.barker-associates.co.uk |

Please note my working week is Tuesday, Wednesday and Thursday.

RICS Certified Historic Building Professional

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Supporting Kids Inspire Registered Charity Number 1129513.

From: Emma Critchley <ecritchley@stalbans.anglican.org>
Sent: 07 May 2021 17:50
To: Philippa Gould <preed@barker-associates.co.uk>
Cc: Andrew Holford (2008luddite@googlemail.com) <2008luddite@googlemail.com>; Peter Joslin (pwjoslin@hotmail.co.uk) <pwjoslin@hotmail.co.uk>; Paul Dougal <pauldougal08@gmail.com>; Joanna Chandler <jchandler@stalbans.anglican.org>
Subject: RE: P17-034 - St Mary, Baldock - Nave & Chancel Roof

This Message originated outside your organization.

Dear Philippa,

Thank you for uploading the Statements of Significance and Needs and the insulation statement, which we'll put on the agenda for discussion at the DAC meeting on 20th May. Have you got any proposals for how secondary glazing might be done? At this time none; the heating report has just identified that the roof is not a key area for the provision of insulation...

I hadn't got as far as setting the consultation requirements in this case, but I have now indicated that consultation is needed with HE and the local Conservation Officer. I have just submit for consultation now via the portal to Planning.Control@north-herts.gov.uk and Historic England.

In the meantime I have had responses from the DAC standing committee on the specification and drawings for the repairs, as follows. I hope most are fairly easy to deal with.

1. Do the drawings show the extent of the roof repairs? Drawing 101 does not show the extent of the area to be re-roofed. We do not have a survey drawing of the roof to be replaced. It is clear and evident when on site which areas are proposed to be re-roofed. I have highlighted the area on the aerial image but do not propose to provide a drawing.
2. The Thermal Report doesn't appear to draw any conclusions – *I think its relevance has been questioned by DAC members because at the stage they viewed it, you had not yet uploaded the insulation report.* Assumed no action required.
3. The form of tender suggests an alternative specification would be considered - if an alternative were proposed it would almost certainly require consent. What alternatives are envisaged? No, this is our standard form of tender as a contractual option but no contractor used this.
4. Reference in A13.120 and A20 to the South Tower should be to the South Porch Stair Turret? All references to the South Tower are referencing the area that could also be referred to as the South Porch Stair Turret.
5. The works might be notifiable for CDM depending on the construction period proposed by the successful bidder. We do not expect the works to be CDM Notifiable; this will be confirmed at the pre-start meeting. The anticipated construction period is 20 weeks, which would (excluding overtime working) be 5 persons on site at all times.
6. Reference to the South Aisle in Specification item H71.580 and Schedule of Work paragraph 2 would appear to be to an earlier project. Noted; please confirm if you require this note to be changed.
7. Clause A31.450 refers to measured quantities but there appear to be none. Noted; please confirm if you require this note to be changed.
8. There does not appear to be a recipe for the three coat lime render or the bedding and pointing mortars for the masonry. Included in 6.1 (page 73 of 93)
9. Which door is the "Nave door" in Schedule of Work clause 9.1.1? The door which leads onto the Nave Roof from the Tower
10. Should the ladder in clause 9.2 of the Schedule of Work be part of the Contractor Design Portion? It is not intended to be included.
11. In the scaffold specification reference to Lightening should Lightning. Noted; please confirm if you require this note to be changed.
12. Is it intended that the works be completed under a temporary roof to protect the fabric? If so should the scaffold specification should say so? This has been left as a contractor's choice in so far as
    - temporary protection measures can be introduced to ensure the fabric is protected from weather entry over the relatively short construction period (with careful programming to reduce risk further)
    - without undue cost to the PCC of a significant temporary roof structure
    - the temporary roof structure would need to be supported by the aisles / span over the aisles, which poses a risk to the rest of the Church.

    The project team have reviewed this and consider on balance that the project can be successfully delivered without a temporary roof; further any financial savings can.
13. What works are envisaged to the mechanical and electrical services in the Contractor Design Portion? None; except minor cable alterations around the Nave Door
14. Archaeology – there is reference to the archaeological contractor and to the need for archaeological recording. The extent of this should be resolved with the archaeological contractor at an early stage, in conjunction with the Diocesan Archaeological Adviser (David Baker) for any queries. Noted; would this be clarified by David Baker following the DAC Meeting.

Best wishes,
Emma

Emma Critchley
Pastoral and Advisory Secretary

Please note that Diocesan Office staff are currently working mainly at home.

You can make applications for DAC advice leading to a faculty or List B permission via the diocesan on-line portal at https://portal.stalbans.anglican.org. A step-by-step User Guide is available. There is advice and information on the diocesan website (address below) including DAC advice leaflets and grant information on the Church Buildings pages.

If you have a query, please e-mail me or phone 01727 818138 within office hours.

For general information and queries, please see the diocesan *Covid-19 One-Stop-Shop* resources at https://www.stalbans.anglican.org/faith/living-gods-love-at-all-times/ and the Church of England website: https://www.churchofengland.org/more/media-centre/coronavirus-covid-19-guidance-churches

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Registered Office: Holywell Lodge, 41 Holywell Hill, St Albans, Herts. AL1 1HE
www.stalbans.anglican.org

From: Philippa Gould <preed@barker-associates.co.uk>
Sent: 06 May 2021 19:49
To: Emma Critchley <ecritchley@stalbans.anglican.org>; Andrew Holford (2008luddite@googlemail.com) <2008luddite@googlemail.com>; Peter Joslin (pwjoslin@hotmail.co.uk) <pwjoslin@hotmail.co.uk>; Paul Dougal <pauldougal08@gmail.com>
Subject: P17-034 - St Mary, Baldock - Nave & Chancel Roof

Dear Emma,

I have uploaded the statement of significance / statement of need and insulation statement to the portal for the roof at St Mary's.

We wish for this to be considered at the next DAC Meeting – May 2021.

I am unable to send out the consultations – is this section active after the DAC Meeting?

Kind regards,

Philippa Gould MEng(Hons) MRICS | Associate | Barker Associates | DDI +44 (0)1279 648051 | www.barker-associates.co.uk |

Please note my working week is Tuesday, Wednesday and Thursday.

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Supporting Kids Inspire Registered Charity Number 1129513.

Emma Critchley

From: Philippa Gould <preed@barker-associates.co.uk>
Sent: 01 October 2021 20:01
To: Emma Critchley
Cc: Peter Joslin (pwjoslin@hotmail.co.uk); Paul Dougal; Andrew Holford (2008luddite@googlemail.com)
Subject: RE: P17-034 - St Mary, Baldock - Nave & Chancel Roof
Attachments: P17-034 Specification Faculty Approval Issue_COMPLETEpdf.pdf

Dear Emma,

I hope you are well. I had missed your follow up email below over the summer silly season.

I have attached a track changed document addressing the Standing Committee's comments as below. I've also added a yellow comment against various items below that may assist.

Kind regards,

Philippa Gould MEng(Hons) MRICS | Associate | Barker Associates | DDI +44 (0)1279 648051 | www.barker-associates.co.uk |

Please note my working week is Tuesday, Wednesday and Thursday.

From: Emma Critchley <ecritchley@stalbans.anglican.org>
Sent: 13 August 2021 14:23
To: Philippa Gould <preed@barker-associates.co.uk>
Subject: RE: P17-034 - St Mary, Baldock - Nave & Chancel Roof

This Message originated outside your organization.

Dear Philippa,

1. In correspondence, you provided some responses to points raised by the DAC standing committee on the spec and schedule (see below). However, apart from the removal of the reference to the South Aisle and a recipe for the mortars, the other issues do not seem to have been addressed in the documentation we currently hold.

Track changed document now submitted as attached. Changes to Prelminiaries section and Preambles also marked up. All issues identified below should now have been addressed.

2. The standing committee also notes that the extent of scaffolding is unclear.

The extent of the scaffolding has not been specified. The lowest two contractors prices did not allow for a temporary roof to ensure a competitive tender. See notes below on Item 12.

3. We have also noted that the specification appears to envisage standing seams whereas the existing roof has lead rolls. As you know, this has been an issue for a number of the interested parties concerned with Furneux Pelham and it has also caused some issues for a church extension project elsewhere in the Diocese, because of difficulties in procuring materials and scheduling the work when contractors with the relevant experience are available.

Additional details added within Scope of Works and sections H71 amened with 810 included.

It is important that the documents available if requested during the public notice period accurately reflect the proposed works and so I think the question of roll battens versus standing seams, at least, needs to be resolved before I can issue the DAC's formal advice. Please can you come back to me on this?

Best wishes,
Emma

DAC queries on documentation with responses (in red) and my notes (in purple)

1. Do the drawings show the extent of the roof repairs? Drawing 101 does not show the extent of the area to be re-roofed. We do not have a survey drawing of the roof to be replaced. It is clear and evident when on site which areas are proposed to be re-roofed. I have highlighted the area on the aerial image but do not propose to provide a drawing. I have added an aerial image to the specification section part 1.0.
2. ~~[The Thermal Report doesn't appear to draw any conclusions – *I think its relevance has been questioned by DAC members because at the stage they viewed it, you had not yet uploaded the insulation report.* Assumed no action required.]~~ ~~Now dealt with.~~
3. The form of tender suggests an alternative specification would be considered - if an alternative were proposed it would almost certainly require consent. What alternatives are envisaged? No, this is our standard form of tender as a contractual option but no contractor used this. To clarify; this would also be if a contractor proposes a different method of working than the one specified; it does not necessarily mean a change in materials / design proposals.
4. Reference in A13.120 and A20 to the South Tower should be to the South Porch Stair Turret? All references to the South Tower are referencing the area that could also be referred to as the South Porch Stair Turret. Please could this be checked for consistency? Changed
5. ~~The works might be notifiable for CDM depending on the construction period proposed by the successful bidder. We do not expect the works to be CDM Notifiable; this will be confirmed at the pre-start meeting. The anticipated construction period is 20 weeks, which would (excluding overtime working) be 5 persons on site at all times. Noted.~~
6. Reference to the South Aisle in Specification item H71.580 and Schedule of Work paragraph 2 would appear to be to an earlier project. Noted; please confirm if you require this note to be changed. Now dealt with. Changed
7. Clause A31.450 refers to measured quantities but there appear to be none. Noted; please confirm if you require this note to be changed. Yes please. Changed
8. There does not appear to be a recipe for the three coat lime render or the bedding and pointing mortars for the masonry. Included in 6.1 (page 73 of 93) Please confirm this is satisfactory?
9. Which door is the "Nave door" in Schedule of Work clause 9.1.1? The door which leads onto the Nave Roof from the Tower. Please could this be reworded for clarity? Changed
10. Should the ladder in clause 9.2 of the Schedule of Work be part of the Contractor Design Portion? It is not intended to be included. Have now changed so that it is in section A20.
11. In the scaffold specification reference to Lightening should Lightning. Noted; please confirm if you require this note to be changed. Please amend for clarity. Changed

12. ~~Is it intended that the works be completed under a temporary roof to protect the fabric? If so should the scaffold specification should say so? This has been left as a contractor's choice in so far as~~
    - ~~temporary protection measures can be introduced to ensure the fabric is protected from weather entry over the relatively short construction period (with careful programming to reduce risk further)~~
    - ~~without undue cost to the PCC of a significant temporary roof structure~~
    - ~~the temporary roof structure would need to be supported by the aisles / span over the aisles, which poses a risk to the rest of the Church.~~

    ~~The project team have reviewed this and consider on balance that the project can be successfully delivered without a temporary roof; further any financial savings can. Noted.~~
13. What works are envisaged to the mechanical and electrical services in the Contractor Design Portion? None; except minor cable alterations around the Nave Door; Please can this be stated? Have now changed so that it is in section A20.
14. Archaeology – there is reference to the archaeological contractor and to the need for archaeological recording. The extent of this should be resolved with the archaeological contractor at an early stage, in conjunction with the Diocesan Archaeological Adviser (David Baker) for any queries. Noted; would this be clarified by David Baker following the DAC Meeting. Please contact David once the spec has been finalised – I believe the same archaeological contractor is to be engaged as for previous works. Will do.

Emma Critchley
Pastoral and Advisory Secretary

Please note that Diocesan Office staff are currently working mainly at home.

You can make applications for DAC advice leading to a faculty or List B permission via the diocesan on-line portal at https://portal.stalbans.anglican.org. A step-by-step User Guide is available. There is advice and information on the diocesan website (address below) including DAC advice leaflets and grant information on the Church Buildings pages.

If you have a query, please e-mail me or phone 01727 818138 within office hours.

For general information and queries, please see the diocesan *Covid-19 One-Stop-Shop* resources at https://www.stalbans.anglican.org/faith/living-gods-love-at-all-times/ and the Church of England website: https://www.churchofengland.org/more/media-centre/coronavirus-covid-19-guidance-churches

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From: Philippa Gould <preed@barker-associates.co.uk>
Sent: 12 August 2021 15:39
To: Emma Critchley <ecritchley@stalbans.anglican.org>
Subject: RE: P17-034 - St Mary, Baldock - Nave & Chancel Roof

Hi Emma,

Could you do it as a proviso for now? Chasing my tail at the moment!

Statement of Needs

Section 1. General information

This should provide an overview of the parish and the current use of the building.

The church is well positioned, in the centre of the town, for worship and events. Residents of Baldock can reach the church on foot or by public transport.

Section 2. What do you need?

Roof Repairs

To provide a weathertight building safe for users of today and tomorrow. The Nave and Chancel roofs are currently leaking.

The internal finishes are in poor condition as the church has not been decorated for many years and here have been numerous roof leaks, causing damage and staining to the internal plaster finishes. Internal repairs are required to the plaster and decorations; this would significantly improve the appearance of the church and make it a more attractive place for worship and other activities.

However, the redecoration should not be carried out until the roofs have been repaired and water ingress stopped.

Masonry Repairs:

To address potentially hazardous masonry falling over footpaths / churchyard and posing a potential hazard to visitors of the Church and surrounding environs and to ensure the future stability of the building.

North Aisle Access

Access onto the North Aisle roof is difficult / poses hazards for clearance of gutters.

Detailed specification attached.

Section 3. The proposals

Set out what you are proposing to do in order to meet the needs set out in section 2.

Roof Repairs
Replace existing leadwork with new sand cast Code 8 leadwork. Provide replacement gutters and downpipes to the Nave.

Masonry Repairs:
Repair masonry to the Chancel and South Tower with the benefit of scaffolding and minimizing damage to lead roofs.

North Aisle Access
Provide CAT ladder access onto the roof from the Nave.

Detailed specification attached.

Section 4. Why do you need it and why do you need it now?

Justify your proposals by explaining why you can't meet your needs without making changes. Also include anything which may have prompted the proposals.

Generally works advised following the 2017 Quinquennial Report.

Roof Repairs
The roofs are currently leaking – refer to photographs accompanying Faculty Application – and causing damage to the internal environment and hidden damage to the building fabric.

Masonry Repairs:
This is a continuation of phased masonry repairs that commenced with the Tower Masonry works in 2009, South Aisle repairs in 2016. Repairs to the North Aisle are anticipated in the future.
Masonry failures to the areas proposed have not yet occurred but the PCC wish to be proactive in ensuring their repair, whilst funds are available and access is possible, and ensuring the integrity of the Church is maintained. The focus for the repair as with previous phases of repair is to complete high-level repairs with the benefit of the access scaffolding required for the roofing repairs.

North Aisle Access

To ensure safer and easier access onto the North Aisle roof from the Nave without damaging roof coverings / parapet gutter details – as outlined in latest Quinquennial report.

Section 5. Justification

If the proposals are likely to harm the significance outlined in the Statement of significance, explain how the proposals would result in public benefits which outweigh such harm (public benefits include matters such as liturgical freedom, pastoral wellbeing and putting the church to viable uses that are consistent with its role as a place of worship and mission).

Refer to Page 12: Part II: The significance of the area affected by the proposal.

Statement of Significance

Basic facts

Parish: Baldock

Dedication: St Mary the Virgin

Benefice: United Benefice of Baldock with Bygrave

Diocese: Diocese of St Albans

Address: Church Street, Baldock, Hertfordshire, SG7 5AE

Grid ref: TL243339

Local Planning Authority: North Hertfordshire District Council

County: Hertfordshire

Statutory Listing of church: Grade I

Any non-statutory designation of contents (e.g. a British Institute of Organ Studies listing for the organ): None

Statutory designation for churchyard and objects within it:
Churchyard wall of Saint Mary's Church, grade II
Tomb of William Clarkson, Hitchen Street, Churchyard of St Mary's Church, grade II

Conservation Area: Baldock Conservation Area

Scheduled Ancient Monument: None

Tree Preservation Orders: None

Protected Species: Bats

County Wildlife Site (or equivalent, or SSSI): No

Any other designations: No

Part I: The church in its urban / rural environment.

Setting of the Church

How does the setting of the church contribute to its landscape / townscape value and to its significance?

St Mary's is located at the centre of the historic market town of Baldock. The town has its origins in the Stone Age and there is evidence to the east of the current town centre of an Iron Age settlement and later a Roman settlement. After the withdrawal of the Romans in about 400 AD the town all but disappeared and there is no entry for the town in the Domesday Book. The current town was established by the Knights Templar some time between 1138 and 1148 and was planned around the four main streets (Hitchin St, Church St, Whitehorse St and High St).

The church is located within the historic core of the town at the cross roads of the four main streets in an area designated as a conservation area. The church is a prominent feature within the town; the tower, in particular, can be seen from many locations within the town as well as further afield. The best unobstructed views of the church from within the town are from Church Street.

The church sits within a churchyard. The churchyard is only open onto Church Street and is bounded by properties on all other sides. The churchyard is surrounded by historic brick walls on most sides with the walls of adjacent buildings forming the boundary in some places. The wall to Church Street is a listed structure. Access to the churchyard can be gained from Norton Road, via a lych gate on Hitchin Street and via two gates on Church Street.

The churchyard is mostly laid to grass with numerous mature trees. A number of tarmacadamed paths cross the churchyard. The churchyard has many historic memorials including the separately listed tomb of William Clarkson.

The churchyard is identified in the Baldock Conservation Area Character Statement as being an important element of open space within the Conservation Area, as well as being important for the setting of the Church itself.

The churchyard is surrounded by historic buildings of various dates, many of which are listed buildings.

The living churchyard

What is the significance of the natural heritage of the site?

The churchyard is laid to grass and there are numerous mature trees including Lime, Cherry and Holm Oak. The trees do not have Tree Preservation Orders but are provided some protection by virtue of being located within a conservation area.

A previous bat survey undertaken in support of the repair works to the tower established that bats use the church and churchyard.

Social History

What is the historic and present use of the church and churchyard by the congregation and wider community? How does this contribute to its significance?

The town and church were founded by the Knights Templar in the C12 on land granted to them by Gilbert de Clare, Earl of Pembroke, in about 1142.

A church is believed to have been built on the site in about 1150 and it is suggested by Gray that at first the church was served by Chaplains of the Order of Knights Templar as there is no record in the Diocesan Registers at Lincoln of the institution of a Rector at Baldock between 1200 and 1308. The rents, tolls and profits collected by their bailiff would have helped to finance their crusades in the Holy Land.

In 1308 Edward II confiscated all of the property belonging to the Knights Templar and by 1312 most of the property, including St Mary's, had been handed over to the Knights Hospitallers and remained with them until the Dissolution of the monasteries in 1540.

The Church Building in General

Provide a description of the church.

Establishment of the church

The church is believed to have been founded by the Knights Templar in about 1150.

Development of the church

The church was rebuilt at the beginning of the C14, soon after it was handed over to the Knights Hospitallers. The earliest part of the building is the east end of the chancel which is C13 and which incorporates the remains of a splayed window with no mouldings thought to date from 1150-1190, presumably from the original Knights Templar church. The piscina in the chancel dates to the C13.

The nave, north and south aisles and the tower were built c.1330. The lower part of the south porch may date to this period, or may be C15. The parvise, clerestory and most of the roofs are C15. The lower part of the south chapel dates from the late C14. The upper part may also be C14 or may be from the early C15. Various recesses in this part of the building date to the C14 and C15. The C15 additions and alterations are likely to have formed part of a major overhaul at that time which was required because the town had fallen on hard times and the parishioners were unable to repair and maintain the church. According to Karin Semmelmann, the church guild established to maintain and repair the church petitioned the Pope and he granted an indulgence to those who attended church on certain days and donated to the church or guild. This allowed the guild to raise the necessary funds to repair the church.

The church was limewashed during the Reformation to hide the wall paintings.

Some alterations were undertaken in the chancel, nave and south aisle in the C18.

There have been four main phases of restoration work. The north side of the church was restored and partly rebuilt in 1826 and the south side was restored in 1869-70 under the supervision of the noted Victorian

architect, Arthur Blomfield. The south chapel was restored in 1913 and major works were undertaken in 1929-31.

The upper stages of the tower and spire were fully refurbished in 2009; the belfry windows were repaired using replica Victorian techniques. The spire and supporting structure at the octagon-spire junction were rebuilt and improved access provided to the base of the spire.

In 2016 the south aisle was provided with new lead coverings; adjustments were made to the fall of the roof slopes to ensure improved weatherproofing to gutters and upstands. The clerestory wall to the nave was replastered and repairs to the South Aisle tower and aisle crenelations were completed at this time also, including repairs

General description of the church

St Mary's is constructed of flint and rubble with stone dressings. The church comprises a chancel, nave with clerestory and north and south aisles, north and south chapels, north and south porches, west tower and boiler room.

The church has been lit by electricity since 1932. The lighting was fully overhauled in 2016 with new addressable DALI lighting system.

The Church Building in Detail

The following description is taken from HJ Gray's book and the Historic Building Report produced by Karin Semmelmann of Archaeological Services and Consultancy Ltd in support of the tower restoration project. The Historic Building Report drew predominantly on HJ Gray's book, *The church of St Mary the Virgin, Baldock,* The RCHME's 1910 report on the church, the Victoria County History entry on the building and the English Heritage list description.

Chancel – High significance

The east end of the chancel is the earliest part of the church, containing the remains of the walls of the twelfth century church.

The east window of five lights, with flowing tracery is of the C14 (decorated Gothic) design, although its stonework appears to be a fairly modern renewal. It is believed that this window replaced a triplet of lancet-shaped lights of the original church. The outline of another lancet window can be seen in the outside walling of the north side of the chapel and during repairs in 1931 the jamb and part of the sill of a window of the same period was found in the angle of the south and east walls of the north chapel which had been built up when the north chapel was built.

There is a C13 piscina built into the south wall of the sanctuary.

The south window of three lights is of the fifteenth century with restored tracery.

The doorway on the north of the sanctuary was found in 1931 during repairs to the plaster. The label moulding had been hacked off and the opening bricked up in about 1712.

The west end of the chancel is an extension nave arcade with no chancel arch, only a C14 screen, separating the two. It was built in the C14 and has a C15 clerestory.

The sanctuary floor was apparently raised in 1756 and encaustic tiles were laid down c. 1881.

The rood loft doors were discovered c. 1930 when it was also found that the chancel ceiling is an early C19 replacement made of deal that had been painted to look like oak, and not an older oak ceiling as had previously been believed. The roof was re-leaded in 1931.

Nave – High Significance

The nave is of 6 bays with a C14 arcade and C15 clerestory with seven pairs of 2-centred lights on each side, the lower parts of which are blocked. Externally, the clerestory walls are in clunch to the north and rendered to the south.
The flat pitched roof dates to the C15. It is oak with moulded cambered tie beams with brackets, the spandrels filled with open carving of different designs, resting on stone corbels carved with heads. The roof was re-leaded in 1931.

The fittings in the nave date to the late 1840s.

North Chapel – High significance

The ashlared clunch in the chequer-work below the stringcourse on the east wall is mainly C19 work as indicated by the fine tool marks indicative of stonework of this period. The remaining ashlared clunch above the string course appears to be largely medieval.

There is a C19 Perpendicular window with some medieval glass in the eats window and north wall. In the northeast corner of the chapel is a C14 niche and on the south wall is a C14 feature which may or may not have been a piscina.

The chapel is distinguished by the amount of carvings and the elaborate string course along the east wall. This is thought to indicate that it had been used as a guild chapel.

The roof was re-slated in 1931.

The chapel is separated from the north aisle by a C15 screen and the organ. The area serves as a vestry.

North Aisle – High significance

The north aisle was repaired and restored in 1826 when the vestry door was erected on the site of the stair turret to the rood loft. At the same time the roof was replaced with a dual pitched deal one and the parapet rebuilt in brick and rendered with Roman cement. The roof was re-slated in 1931. The flat-pitched inner roof is plastered in panels, each bay being divided into four panels on each side of the roof. The intersections of

the ribs dividing the bays into panels have carved bosses and pattrassess and the cross ribs at the junction with the cornice have carved figures.

There are three C15 windows of three lights with reused C14 labels and stops. These windows were heavily repaired in 1871. The west window of three lights is C14 in design and uses some old stones but much of the stonework is modern.

Externally, in the north wall is a C14 recess with an ogee arc with restored jambs. Set in the recess is a C14 coffin lid with a cross in relief.

North Porch – High/moderate significance

The present appearance of the north porch dates to the early C19 (either 1826 or 1836). At that time an earlier porch with open timber roof were encased and altered. It is rendered with Roman cement and has an imitation stone groined ceiling with ribs also in cement. The roof is covered with tiles with a plain parapet wall to the front gable only. The old oak rafters and cross braces along with some of the old walls survive under the cement.

South Chapel – High significance

The lower part of the walls are C14 and the upper part are early C15. The double piscine and sedilia are C14 or C15. The wall appears to have been heightened in the C18. The stonework was extensively repaired and the flintwork refaced in 1869-70.

The windows are C15 with modern tracery.

The floor was lowered at some time but raised again at the eastern end in 1913 when the chapel was restored.

South Aisle – High significance

The walls are thought to be part C14 and part C15. A break in the walls is thought to indicate the probable junction with a former transept.

There are three C15 windows in the south wall and one in the west, all of which contain three lights and have been heavily restored.

The roof appears to have been rebuilt after the Reformation when the rood loft door was blocked, as the 1931 restoration work discovered that the northern corbel of the tie beam had been built within the blocked doorway. The roof was re-leaded in 1931 and again in 2016.

The south side of the church was heavily restored in 1869-70 following a report by the architect Arthur Blomfield which noted the decay of the building fabric and that repairs had been made in cement. The parapet walls were repaired and refaced in 1870 and the windows restored.

In 2016 the roof was refurbished and new leadwork provided to the roof entirely, funded via Lottery Funding. At this time repairs were undertaken to the parapet walls with rebuilding of the crenelations and new masonry

details. The clerestory wall was re-rendered also. An area of grout repair was completed to the centre of the south aisle to address a failing rubble core.

South Porch – High significance

The C15 south porch was restored in 1869-70 when the parvise floor was removed and the original parvise windows replaced. The original window openings were discovered when the porch was restored in 1931. The porch was re-roofed in 1870 and has a slate covering.

Tower – High Significance

The tower consists of three stages with angle buttresses, crenellated parapets and a lead encased spire on an octagonal base which dates to 1816. The tower has a single lancet window in each elevation of the middle stage, a door in the south elevation and a heavily restored C14 window in the lower stage of the west elevation and double windows with Y tracery in the belfry. The tower is largely described as being early C14 although it is possible that the lower parts of the walls are older. The 2-centred tower arch with four moulded orders dates from the first quarter of the C14.

The walls of the lower two stages are of coursed flintwork with areas of ashlar clunch, there is also some Barnack stone. It is believed that parts of the walls would have been rendered, as evidenced by the presence of nails driven into the stonework. The upper stage of the tower is rendered.

Urgent repairs were carried out to the tower and its foundations in 1841 and further repairs carried out in 1961, although these later repairs are undocumented.

The area at the base of the tower was repaved in 1901.

Extensive repairs were completed to the upper stages of the Tower and Spire in 2009. This included rebuilding of the rubble walls to the upper stage, rebuilding the Belfry windows with a replica modern Victorian repair. The spire was re-leaded and extensive repairs to the Octagon – Spire junction undertaken at this time also. The copper to the Octagon was replaced with leadwork at this time.

Contents of the Church

Item or group of items	Significance
Altar – 1852. Erected by the Rev. William Fowler in memory of his wife.	Moderate
Altar rails - Probably contemporary with Altar (1852).	Moderate
Choir stalls - 1881	Moderate
Clergy Stalls – 1936 as a memorial to Canon L H Boswall (Rector 1930-34)	Moderate - Low
Credence table – 1931. Made by Mr H Williams from old oak taken from the roof during repairs.	Moderate - Low
Chancel screen – late C14 in three bays with two half bays at north and south ends.	High
Nave Pulpit – Probably 1849 when pews were installed.	Moderate
Nave Lectern – late C19	Moderate
Nave Altar - C17, lengthened 1913	Moderate - High
Nave Pews – 1849	Moderate
Nave dais – fixed platform installed in late C20 for use with nave altar.	Low
South Chapel Altar Rails - 1913	Moderate - Low
South aisle screen – C15 (c.1480) three bays on either side of the doorway.	High
North aisle screen – C15 consisting of a central doorway with four narrow bays on either side.	High
Tower Font – Second half of C12 of Transitional Norman design.	High
Stained glass – South medieval; South aisle windows with glass attributed to Albert Bell of Clayton and Bell.	Moderate - High
Organ – new organ built c. 1912 by Norman & Beard of Norwich. Electric blowing was introduced in 1934. Extensively reconditioned in c2000	Moderate - Low
Monuments – Stone slab in front of chancel screen to the memory of Reginald de Argentein.	High
Clock – 1882 by Potts & Sons of Leeds	Moderate

Register - The registers are in six books: (i) all entries from 1558 to 1709; (ii) baptisms and burials from 1710 to 1792 and marriages from 1710 to 1753; (iii) baptisms and burials from 1793 to 1812; (iv) (v) and (vi) marriages from 1754 to 1788, 1788 to 1804, and 1804 to 1812, respectively.	Moderate – High
Plate - The plate includes a cup and cover paten of 1629. This is the Byrd chalice (The rector Josiah Byrd offered it to Charles 1 to drink from on his way to trial)	Moderate - High

Part II: The significance of the area affected by the proposal.

The proposals involve the following:

- Removal of existing roof coverings to the Nave and Chancel
- Removal of existing guttering and downpipes from the Nave
- Repairs to masonry elements to the Chancel and South Aisle Tower
- Provision of access ladder to North Aisle

The proposals will have a direct effect on the fabric as new materials will be incorporated into the Church.

Significance of these particular parts, low, moderate or high.

The Nave dates to C14 (c1330). The clerestory and roof date to the C15.	High
The Chancel dates to C14 (c1330) with the incorporation of some C12 fabric. The clerestory and roof date to the C15.	High

Describe and assess the impact of your proposal on these parts, and on the whole. Characterise impacts as either low, moderate or high.

Removal and reinstatement of roof coverings – **Low**

This part of the proposal seeks to replace the failed lead roof coverings with Code 8 lead, replicating existing details as much as possible.

The impact of the proposal is considered low as the works are like-for-like and address ongoing weatherentry to the fabric and internal environment.

The proposals are all in alignment with current Historic England / Lead Sheet Association Guidelines using like-for-like materials (Code 8 lead) and traditional detailing. Minor adjustments will be made to the timber detailing of the Chancel Roof to ensure minimum upstands are achieved.

Replacement of gutters and downpipes from the Nave - **Low**

The impact of the proposal is considered low as the works are like-for-like and address ongoing weather entry to the fabric and internal environment. The existing gutters and downpipes are cast iron, generally satisfactory but the opportunity sought to provide with new like-for-like fittings.

North Aisle Access - **Low**

Ladder to be placed in a visually unobtrusive setting and will significantly improve safe access for maintaining the roofs and ensuring gutters are clear.

Finally, explain how you intend, where possible, to mitigate the impact of the proposed works on the significance of the parts affected and the whole. This should include an assessment of the environmental impact or effects of these changes.

How reversible are the impacts?

The works are considered repair and maintenance works to address time-served elements. All works are to be completed in accordance with good conservation practice with historic fabric retained where possible.

The provision of new leadwork is considered partially reversible with only failed timber being removed or the profile of the roof adapted with the provision of new timber to improve weatherproofing.

The PCC have reviewed the options for providing insulation to the Nave and Chancel roofs and have decided not to pursue this option – see separate document outlining reasons for this.

Sources consulted

Gray, HJ, The Church of St Mary the Virgin Baldock
List of Buildings of Special Architectural or Historic Interest
‘Buildings of England’ series (Pevsner and later authors)
Hertfordshire Archives and Local Studies

- 'Parishes: Baldock', in A History of the County of Hertford: Volume 3, ed. William Page (London, 1912), pp. 65-73 http://www.british-history.ac.uk/vch/herts/vol3/pp65-73 [accessed 30 December 2014].

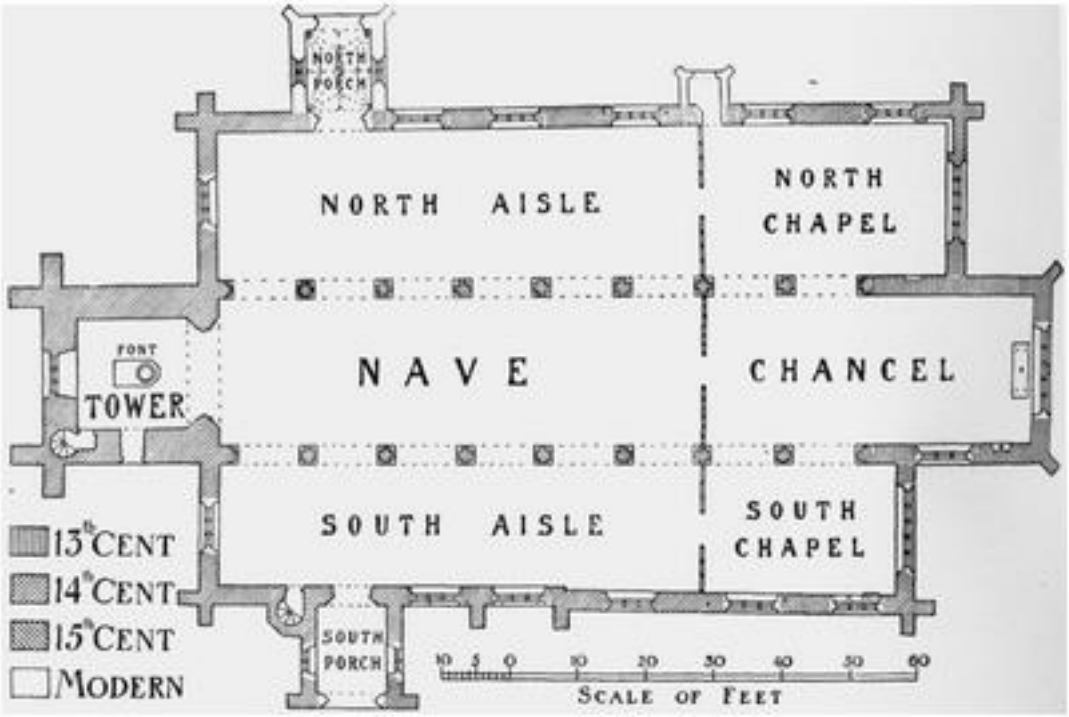

Fig. 1 Plan of St Mary's Baldock