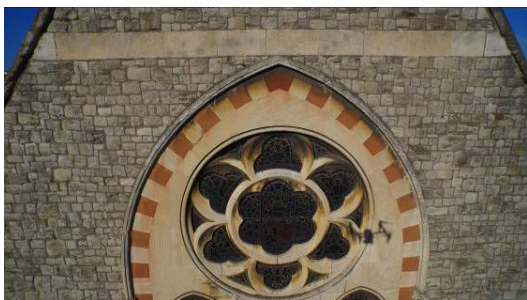
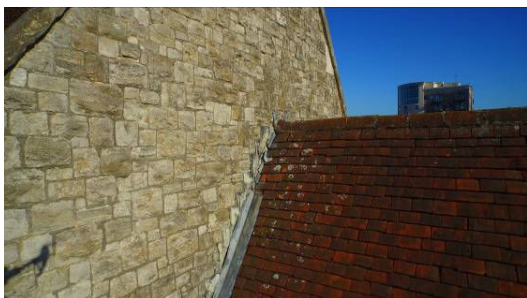


SPECIFICATION & SCHEDULE OF REPAIR
EAST GABLE REPAIR WORKS
THE CHURCH OF THE SACRED HEART, READING



Oxley Conservation Ltd
8a Friday Street
Henley on Thames
Oxfordshire RG9 1AH

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Specification and Schedule of Repairs
The Church of the Sacred Heart of Jesus - Watlington Street, Reading

Oxley Conservation
November 2016

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1 PRELIMINARIES

1.1 Employer

Polish Catholic Mission Reading Parish

Contact: Mrs Nicpon

1.2 Employer's consultants

1.2.1 Contract Administrator

The Contract Administrator is:

Richard Oxley BSc DipBldgCons MRICS IHBC
Oxley Conservation Limited
8a Friday Street, Henley on Thames, Oxfordshire RG9 1AH

T: 01491-414191

E: Richard@oxleyconservation.co.uk

1.2.2 CDM Adviser

Andrew Goddard Associates Limited
Avon House, 82 Wellington Street, Thame, Oxfordshire OX9 3BN

Contact: Andrew Goddard

T: 03300 886585

E: info@aga-ltd.co.uk

1.2.3 Project Manager

Anna Cullum
Cragg Management Services
Bolney Place
Cowfold Road
Bolney
Haywards Heath
West Sussex
RH17 5QT

T: 01444 880344

1.3 The Subject Property

Church of the Sacred Heart of Jesus
Watlington Street [St John's Road]
Reading
Berkshire

1.4 Location of site

Location maps enclosed.

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1.5 Site visit

The Tenderer will visit the site prior to submitting a tender. It is the Tenderer's own responsibility to become fully acquainted with the extent of the works, the nature of access, ground, soil, storage space, and all matters which may affect the programme and cost of the works.

The Tenderer will be deemed to have allowed for all matters associated with the above by submitting a tender. No claims for extras will be entertained for items that could reasonably have been foreseen by visiting the site prior to submitting a tender.

1.6 Brief Description of Works

To carry out repairs to address urgent works to the tower of the church; repairing weathered masonry and repointing the walls of the tower and associated works.

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1.7 Form of Contract

The agreement will be the Joint Contracts Tribunal "Minor Works Building Contract 2011" with all amendments current at the Base Date.

The Contract will be executed under hand.

The Contractor will be bound to sign this form of Contract on acceptance of his price.

The document will provide for the work to be carried out on a fixed price basis and the contract particulars in it will be completed in the following manner:

Recitals

First Recital	Polish Catholic Mission Reading Parish
Second Recital	Delete "the drawings numbered/listed in ____"
Third Recital	Delete "or provided a schedule of rates"

Articles

Article 2:	A fixed price to be entered
Article 3:	Delete "Architect/"Insert "Oxley Conservation Limited" [of] "8a Friday Street, Henley-on-Thames, Oxfordshire, RG9 1AH"
Article 4:	Insert "Oxley Conservation Limited" [of] "8a Friday Street, Henley-on-Thames, Oxfordshire, RG9 1AH"

Contract Particulars

Schedule 2 Base Date	10 days before return of tenders
Construction Industry Scheme	Employer is NOT a "contractor"
Fifth Recital CDM Regulations	The project is notifiable
Schedule 3	Paragraphs 1, 2, 3, 4 and 6 apply
Article 7 Arbitration	Article 7 and Schedule 1 (Arbitration) apply
Clause 2.2 Date for Commencement of Works	A fixed date to be entered
Clause 2.2 Date for Completion	A fixed date to be entered
Clause 2.8 Liquidated Damages	£250.00 per week
Clause 2.10 Rectification Period	12 months
Clause 4.3 Percentage Paid during works	95%
Clause 4.5 Penultimate certificate	97½%
Clause 4.8.1 Supply of documentation	3 months
Clause 4.11 Fluctuations	Deleted
Clause 5.3.2 Insurance for any one occurrence or series of occurrences arising out of one event	£5,000,000
Clause 5.4 Insurance of the works	Clause 5.4B applies
Clause 5.4B1 Percentage to cover professional fees:	22%
Clause 7.2 Adjudicator	RICS
Schedule 1 Arbitrator	RICS

1.8 Insurance

The Contractor will provide Proof of Public Liability Insurance of a minimum of £5,000,000 (five million pounds).

The Contractor is required to produce evidence, if required, of appropriate cover in force at all material times. The Contractor will be required to produce evidence of insurance cover for damage to the existing structure or works caused by negligence on the part of the Contractor or his workforce.

1.9 Specification

This is a performance specification; the Contractor is required to take for everything shown on the Drawings and/or itemised in the Specification and Schedule of Works. No claims for extras will be considered in respect of items omitted from the Drawings but itemised in the Specification or vice-versa.

Except where it specifically states; "fix only", it is implied throughout the Specification and Schedule of Works that all materials for the satisfactory completion of the works will be supplied by the Contractor.

1.10 Area of Works

The Contractor will confine themselves to as small an area as possible for the execution of the works and storage of materials. The location and size of the areas to be used is to be confirmed with the Contract Administrator [CA] prior to commencement of work. Areas other than designated areas and access routes are to be out of bounds to the Workforce.

The Contractor shall not use the land or buildings for any other purposes other than the proper execution of the works.

1.10.1 The Contractor to liaise with the church representatives over the arrangements to use the 'external' WC facilities of the church hall for the duration of the Contract. The toilets are to be kept clean and tidy at all times as it is in regular use. Also refer to **1.31 Toilet & Washing Facilities**.

1.10.2 Areas other than the designated areas and pathways are to be out of bounds to the Workforce.

1.10.3 All materials and equipment are to be loaded and off-loaded and transported to and from the site using the designated loading area and pathways. The intention is to reduce the risk of injury to the visitors to the church and members of the public along the public highway and to minimise the risk of damage to the church.

1.10.4 The grounds and pathways used for the purpose of the works are to be protected against damage. Allow for making good damaged areas at the end of the contract.

1.11 Drawings etc.

Two complete copies of the Contract drawings and Specification will be supplied to the Contractor carrying out the work. The Contractor will be required to pay for any other further copies of drawings, schedules, etc. he may require. One complete set of Contract Drawings, Schedule of Works and Specification (with up-to-date variations) should be kept in the possession of the Site Foreman for the duration of the contract. Every Tradesman should be familiar with the relevant parts of the Specification (including prelims.), Schedule of Works and Drawings.

1.12 Plant, Tools and Vehicles

Allow for providing all necessary plant, tools, equipment and vehicles required for the execution of the works.

1.13 Site Meetings

The Contractor shall hold site meetings at regular intervals as necessary for the proper management and co-ordination of the project. The Contract Administrator shall be informed of the time and date of each meeting at least five working days before each meeting.

A pre-contract meeting will be held before works starts on site and this meeting shall be attended by the Contractor (or his representative), the Site Foreman and the Contract Administrator.

1.14 General Foreman

The Contractor will be required to keep a responsible and able Foreman, in constant attendance on the Works as his representative, skilled in the trades and callings required by this Contract. The Foreman may also be employed as a tradesman on the works but is to have charge of no other works but this and is not to be replaced during the progress of the Contract without the agreement in writing of the Contract Administrator.

1.15 Setting out of Works

All particulars and measurements for the general setting out of the works shall be taken on site.

The Contractor shall accurately perform all setting out and shall provide all necessary instruments, templates, rods and setting out boards etc. as may be necessary for reference purposes during the progress of the works.

The Contractor will be held responsible for the accuracy of the setting out and of all the works including works by sub-contractors and shall amend any error arising from inaccuracy at his own expense.

Figured dimensions are to be worked to, and not scaled from the drawings. Before putting work in hand, the Contractor is to check dimensions and relevant details on the site and agree measurements with the sub-contractor or supplier.

1.16 Safety & Welfare Measures

The Contractor shall ensure that all Safety and Welfare measures required under the provisions of any current enactment or regulation, or the working rules of any relevant industry, are strictly complied with.

Where appropriate the Contractor shall comply with the duties of the 'Principal Contractor' under the Construction (Design and Management) Regulations 2015.

The Employer/Contract Administrator reserves the right to instruct the Contractor to suspend work if health and safety regulations are not being complied with. The Contractor is to ensure that the Contract Administrator is informed immediately of any accidents occurring to the workforce or members of the public.

The Contractor shall be responsible for posting warning notices and for taking all reasonable measures to ensure that members of the public do not encroach on the working areas.

1.17 Transport and Workpeople

If the labour position in the district is or becomes unsatisfactory the Contractor will be required to augment his labour force by adequate recruitment from other districts.

Allow for the cost of importation of labour to the site including paying excess rates over local rates, travelling time, fares, or other costs of conveyance of workmen to and from the site, subsistence allowances and for providing all necessary living accommodation for the workmen.

1.18 Overtime and Incentives

If the Contractor determines for any reason to permit the working of overtime, he must include for same in his Tender – no extra payment will be allowed for this at the settlement of the account.

The Contractor must allow in his Tender for any additional cost above the standard rate of wages necessitated by any incentive or production bonus scheme he may decide to operate, or for any extra cost of wages paid at higher rates than standard time rates authorised by the recognised wage fixing board of the trade concerned.

1.19 Sub-Contractors

The Contractor shall supply with his tender the names, addresses and trades of all sub-contractors to be employed in carrying out the Contract.

1.20 Attendance on Sub-Contractors

The Contractor is to obtain from all sub-contractors full particulars as to their requirements and is to supply them with all necessary dimensions and other information so that their work may be correctly executed. If the Contractor fails to do this, he is to effect all such alterations at his own expense or pay the sub-contractors' charges therefore. Attend upon, cut away for and make good after all trades, by all other workmen, including affording facilities to all sub-contractors and any other parties employed upon the building so that their work may proceed during the ordinary progress of the work.

Allow such persons the free use of ordinary scaffolding, ladders etc., provide and erect and additional scaffolds required and alter, shift and strike same when directed; unloading if required all goods supplied by sub-contractors and provide them with water, watching, lighting, storage. The Contractor must make arrangements with the sub-contractors as to the time and manner of executing their work and for working in conjunction with them.

1.21 Proprietary Products

In all cases where proprietary trade names or manufacturer's catalogue numbers are mentioned in the description of items or materials for incorporation into the works, it is intended as a guide to the type or quality of the material required and a suitable alternative will be accepted if the Contractor so desires, provided that it is in every respect at least equal to the specified material, its use involves no extra cost to the Employer, and provided also that the Contractor obtains prior approval of the alternative materials from the Contract Administrator in writing before placing an order for the specified item.

1.22 Water for the Works

A water supply will be available for use by the Contractor. This is to be arranged with the representatives of the church. The Contractor is to allow for the continued use of this water supply by the church.

Measures to prevent splashing and spillage onto the walls of the building and causing the saturation of the ground are to be taken.

Allow for any temporary plumber's work and other necessary arrangements for storing water and distributing it about the site as required and for clearing away at completion and making good any damage.

All water must be clean and fresh for the whole of the works.

1.23 Lighting and Power for the Works

An electric supply will be available for use by the Contractor on site.

The Contractor to liaise with the Employer to negotiate access to the electrical supply.

Allow for providing all necessary temporary lighting and electric power required for the Works including that of sub-Contractors in the positions and at the times required, and for installing all temporary wiring, fittings, meters etc., and defraying the cost of all fees and charges in connection therewith.

1.24 Scaffolding and Access Towers

To provide all additional scaffolding, access towers, boarding, ladders, hoists as necessary for carrying out the works.

All scaffolding, access towers etc. are to be erected and maintained in accordance with good practice as defined by the Health & Safety Executive in their 'Health & Safety in Construction' publication.

The scaffolding to be erected and maintained, with periodic inspections, during the works by members of the National Association of Scaffolding Contractors.

- Provide the fencing and barriers necessary to exclude members of the public, and other unauthorised persons, from the areas of work.
- All scaffolding/towers shall be erected as independent structures and shall not draw support from the structure.
- Put locks shall not be driven in to the masonry.
- The ends of all scaffolding poles to be fitted with plastic caps.
- The ends of scaffolding poles to be padded where they are close to or at risk of becoming in contact with friable masonry.
- The scaffolding to be fitted with debris netting and/or monarflex sheeting.
- Hoists must be supported properly and cantilevered away from the structure to avoid damage to the structure.
- Scaffold supporting hoists must be of sufficient strength to adequately support the heaviest load being raised on the hoist.
- Secure guard and toe boards to be provided. All boards are to be properly tied down.
- Ladders giving access to the lowest stage of scaffolding/towers are to be removed and made inaccessible at all times when the workforce is not on site.

The Contractor is to obtain all local authority licences and permissions and is to pay all fees arising from the erection and maintenance of the scaffold. All local authority lighting, signing and protection requirements are to be adhered to and all fees and expenses paid.

1.25 Shoring & Strutting

The Contractor shall provide and maintain during the execution of the works all shoring, strutting, needling and other supports reasonably required to preserve the stability of the works and the walls etc.

The Contractor will be held responsible for all injuries to persons and for making good or reimbursing the cost of making good all damage to the building owners or to any surrounding property caused by or arising out of any failure on his part to comply with the requirements of the above paragraph.

1.26 Safeguarding the Works, Materials & Plant against Damage & Theft

Allow for watching and lighting as may be required for the protection of the public and security of the works, plant and materials on site and in the Contractor's workshops or depot. The Contractor will be held entirely responsible for the safety of the Public and all persons working on site or visiting the site during the execution of the Works.

The Contractor will also be held responsible for all materials and fittings delivered to the site for his own, and all sub-contractor's use, and shall make good and damaged or missing materials and fittings at his own expense, and shall provide all necessary protection to such materials and fittings. All materials and fittings to be checked on arrival on site for defects or missing parts. Any such defects must be reported to the Contract Administrator immediately.

Provide all necessary tarpaulins, sacking, boarding or other coverings, temporary gutters, down chutes, drains, soakaways, fences and storage compound etc. as required for the protection of material, works and site which may be damaged by storm, rain, snow and frost or other inclement weather and succeeding work and traffic. Clear away when required and make good all work so damaged as the result of the omission of all such protection etc.

Allow for the protection of all vulnerable parts of the historic fabric during the Contract. Any damage caused to be made good at the cost of the Contractor to the satisfaction of the Contract Administrator.

1.27 Maintenance of Public and Private Roads

The Contractor is to unload and stack materials immediately they arrive on site and is to ensure that all public and private roads and footways are kept clear at all times. Allow for making good damage (if any) to public and private roads and footways caused by or attributable in any way to the cartage of plant or materials by either the Contractor or any sub-Contractor and for indemnifying the Employer against loss or damage or claims by the Local Authority or others to the roads, paths etc. by reason of increased traffic and damages.

1.28 Local Bye-Laws & Police Regulations

The Contractor is recommended to make himself fully acquainted with the requirements of the Local Bye-Laws and Police Authority regarding any possible restrictions as to hours that compressors, drills, etc. may be used and any other regulations that may affect his Tender. Any omissions to comply with these recommendations shall not form a basis of any claims for extra payment or time.

1.29 Contractor's Liability

The Contractor shall carry out the Works in such a way as to cause a minimum of annoyance, nuisance and disturbance to the owners and occupiers of surrounding property and undertake to indemnify the Employer against any claims, demands and proceedings arising as a result of his failure to comply with the above requirements.

1.30 Advertisements

Nameboards can be exhibited on the temporary compound upon receipt of permission from the Employer.

The Contractor is to erect and display signboards provided by Heritage Lottery Fund, the Contract Administrator and any other approved funding organisation or consultant.

1.31 Toilet & Washing Facilities

The Contractor to liaise with the Churchwarden over the arrangements to use the 'external' toilet to the church hall.

The external toilet is to be kept clean and tidy at all times as it is in regular use by members of the congregation.

1.32 Removing Rubbish and Cleaning

Allow for clearing away all dirt and rubbish including the rubbish and waste materials of all specialists and sub-contractors from time to time as it accumulates and maintain the site in a clean and orderly condition throughout the duration of the Contract.

The Contractor is to comply with current legislation regarding controlled tipping of refuse and disposal of contaminated water, etc.

1.33 Damage to the Existing Fabric

The Contractor shall take all reasonable steps to avoid damage to existing fabric during erection of scaffolding, taking down, and reconstruction work. Any damage to existing work to be remedied with materials and standard of workmanship to match existing at the Contractor's expense.

1.34 Fire Precautions

The use of flame-producing apparatus will **NOT** be allowed unless a hot work permit has been obtained from the Contract Administrator prior to the commencement of work. This is to be done on every occasion that hot work of any type is undertaken within or upon the fabric of the property or plant in the open.

All combustible waste such as shavings, packing etc. must be removed at the end of each working day.

The burning of rubbish and bonfires is not permitted on site.

The Contractor is to ensure that appropriate fire-fighting equipment (extinguishers, fire blankets) is available on site for the duration of the Contract and that the Site Foreman is familiar with their use and position on site at all times.

Smoking on site will not be allowed at all times.

Before starting work on site, the Contractor is to notify the local Fire Service of the nature and duration of the Contract and to provide information to the Fire Service of the means of access to the site.

1.35 Due consideration

The Contractor is to have due consideration for the continued use of the church, the congregation and visitors to the church and the areas of the church outside the site area of work.

The church is to remain in use with full access being maintained to the church and the church hall during the works.

1.35.1 Radios and playing music

The playing of transistor radios, cassette recorders, etc. on site will not be allowed.

1.35.2 Services and funerals

There are regular services and associated events at the church. The times of the weekday services are as follows:

Mass (Monday –Wednesday) is at 10.00 am [duration usually between 30 and 45 minutes].

Mass (Thursday) is at 12.30 pm [duration usually between 30 and 45 minutes].

Mass (Friday) is at 19.00 pm [duration usually between 30 and 45 minutes].

Mass (Saturday) is at 19.00 pm [duration usually between 30 and 45 minutes].

The Contractor should familiarise himself with the dates and times of regular church services via communication with a designated representative of the church and should include for ceasing work at such times, or carrying out works that do not cause disruption or interfere with the use of the church.

The Contractor is to also ensure that access to the church and the interior of the church is clean and tidy prior to a service taking place.

1.35.3 Funerals

Work should be stopped during funeral services and the cost of any delays incurred shall be reimbursed to the Contractor on a day-work basis using the rates entered in the Schedule of Rates with the reservation that the maximum amount payable will be for the labour hours lost by the operatives affected by the stoppage for the following period (whichever is the least):

- a. Time lost until the men can be deployed elsewhere.
- b. The duration of the stoppage.
- c. The working hours remaining in the day on which the stoppage occurred – no amount will be paid for men being idle on the site for whole working days.
- d. No payments will be made for stoppages of one hour duration or less.

During funeral services, the workforce shall remain out of sight of mourners. With the exception of the emergency contact mobile telephone all telephones are to be switched off during services.

1.35.4 Place of Worship

The church is a place of worship and as such should be treated with due respect by the Contractor and his workforce. Due consideration should also be paid to visitors to the church and church hall during the course of the works.

Access to and from the church and the adjacent church hall is to be maintained at all times – for access for parking for parishioners and funeral hearses etc.

1.36 Listed building

The subject property is listed Grade II and recognised as being of special architectural or historic interest. Every endeavour is to be taken to carry out all work in a manner that reflects the building's listed status.

All works are to be carried out in a conservation minded manner using materials and methods appropriate to a listed building. This is to be stressed to the Work force.

Only materials that are accepted as being appropriate and compatible with old buildings are to be used in the repair of the building. Under no circumstances should cement be used in the repair of the building. Cement can only be used upon receipt of the written authority of the Contract Administrator.

Where unauthorised cement, or other materials deemed inappropriate by the Contractor Administrator, is found on site and the Contractor Administrator has sufficient doubt as to the extent and nature of its use any suspect work will be removed and rectified in accordance with the Specification & Schedule of Works at the Contractor's expense.

Where any finds of architectural and/or historical interest are found work is to cease immediately and the Contractor Administrator is to be informed.

1.37 Use of Site by Contractor

Permitted working hours on site for the purpose of tendering and programming to be:

Monday – Friday:	8.00 a.m. – 6 p.m.
Saturdays:	8 a.m. – 1.00 p.m.
Sundays:	No work permitted

Unless otherwise agreed beforehand by the Contract Administrator and Employer all work on site is to be restricted to these hours, subject to item **1.35.2** having due consideration for the continued use of the church.

1.38 Unloading and Hoisting

The Contractor shall be responsible for unloading, placing in and removal from store and for hoisting all materials and plant for the contract whether to be fixed by the Contractor or sub-contractor.

All materials are to be carefully lowered to ground level by hoist. Under no circumstances are any materials to be thrown from the building, scaffolding or towers.

1.39 Disposal and re-use of old Material

The whole of the materials from demolition and dismantling work shall become the property of the Contractor, except where otherwise specified, and shall be cleared away from the site as the work proceeds.

Materials specified to be re-used shall be carefully taken down, protected from damage, cleaned, over-hauled and stored as necessary for re-use.

1.40 Second-hand Materials

Unless otherwise specified by the Contract Administrator in writing, the use of second-hand/'salvaged' materials from other sites and buildings will not be allowed.

1.41 Working New to Old

Unless otherwise directed by the Contract Administrator, when fixing/splicing new material to existing always work new to fit existing rather than vice versa. Do not remove any existing material unless specifically instructed to do so by Contractor Administrator.

1.42 Time Sheets/Variations

Detailed time sheets are to be kept by the Contractor for all tradesmen and labourers for the duration of the Contract. Where unpriced Variations to the Contract are ordered in writing by the Contract Administrator, weekly time sheets (detailing individual workmen and hours) should be presented to the Contract Administrator for approval within five working days of the completion of each week. Failure to conform with the above may result in non-allowance of claims for additional payment for Variations.

Any variations from the specification have to be agreed by the Contract Administrator prior to being carried out. Written approval needs to be obtained from the Contract Administrator for any variations prior to initiating the works.

1.43 Hourly Rates

Details of hourly rates for tradesmen/labourers are to be included with the tender on a separate itemised sheet to the rear of this document. This is to form part of the contract and will provide the basis for calculating unpriced variations/additional work.

1.44 Mobile Telephones

The Contractor is to maintain a working mobile telephone on site for the duration of the Contract for use in case of emergencies. The Contractor to confirm that there is adequate network coverage prior to the commencement of works.

1.45 Security

All valuable materials brought to site under this Contract are to be kept locked in a safe storage area or in a secure unit. Before work starts on site, the Contractor should inform the local Police of the nature, starting date and duration of contract.

1.46 Programme

The Contractor is to submit a detailed programme of works to the Contract Administrator at least 15 working days before work starts on site.

1.47 Samples

Allow for providing samples of materials, methods and workmanship as set out in the Schedule of Works and submit same to the Contract Administrator in sufficient time for him and Historic England to consider the samples for approval before bulk orders are placed or the work is carried out.

1.48 'Allow for ...' Items

Where the term 'Allow for ...' is used in the Schedule of Works, this implies that the Item is included for the purpose of pricing and should not be executed (nor orders placed for materials) until the precise nature and extent of the work has been agreed with the Contract Administrator on site and confirmed in writing by him.

1.49 Acceptance of Tenders

The price is to be itemised in accordance with the Schedule of Works and the prices carried through to the collection summary. The Tenderer is responsible for including any costs he considers necessary to comply with the Preliminaries and Trade Preambles in this Specification and the absence of any price against these items shall not affect any Contract subsequently entered into.

The Employer is not bound to accept the lowest or any Tender.

1.50 Works at Completion

The Contractor shall remove all rubbish, plant and surplus materials from the site and leave the whole of the works in a clean condition to the satisfaction of the Contract Administrator.

2 TRADE PREAMBLES

2.1 MATERIALS

Wherever possible all materials should be obtained from sustainable, well-managed and/or local sources.

2.1.1 Non - hydraulic lime putty

To be derived from fresh, high calcium, non-hydraulic quicklime, slaked in an excess of water under controlled conditions and allowed to mature for at least three months.

All lime putty to be kept well covered during storage to prevent drying out.

2.1.2 Hydraulic lime

Hydraulic lime to be from a supplier approved by the Contract Administrator.

The source of hydraulic lime has to be approved with the Contract Administrator prior to purchase/use.

The hydraulic lime is to be used in accordance with the manufacturer's technical advice and recommendations.

2.1.3 Sharp Sand

The sand is to be clean well-graded sharp sand that meets with the approval of the Contract Administrator.

2.1.4 Soft Sand

The sand is to be "as dug" soft sand that meets with the approval of the Contract Administrator.

2.1.5 Aggregate

Aggregate to match the aggregate in the existing mortars that meets with the approval of the Contract Administrator.

2.1.6 Stonework

New stonework is to match the existing/host stone wherever practicably possible [in colour, texture and grain].

Limestone:

Syreford limestone
Syreford Quarries & Masonry Ltd, Brockhill Quarry, Roofing Slates, Nauton GL54 3BA

Red sandstone:

Corsehill Sandstone
Annan, Dumfriesshire, Scotland

Ragstone:

Kentish Rag to be from Barming near Maidstone, Kent.

2.1.7 Timber

Softwood timber to be Douglas Fir.

The timber used in the repair of the building should meet the following specification:

- A. The timber to be obtained from sustainable, well managed, local sources. The timber, particularly softwoods, to be approved by the Forest Stewardship Council (FSC) and should bear the FSC logo. **Information to illustrate that the timbers used are from appropriate well managed, local and/or sustainable sources to be provided to the Contract Administrator.**
- B. The timbers to be from the heartwood, sapwood is to be kept to a minimum.
- C. Second hand/salvaged timber is **not** to be used. The written consent of the Contract Administrator has to be obtained before any second hand/salvaged timber is used. Where consent for second hand/salvaged timber is provided the timber must have a provenance of origin.
- D. The timber should be free from major defects.
- E. The timbers should be band sawn or planed finish. They should not be artificially distressed.
- F. Timber to be air-dried for a year per inch of its thickness (up to 5 years) in a section similar to its final size.
- G. Green (unseasoned) timber should only be used for replacement timbers where its shrinkage will not cause structural problems and is specifically approved by the Contract Administrator.
- H. The timbers should be stored under cover and off the ground in areas with good ventilation.

2.1.8 Biocide

To be Wykamol **Microtech Biocide** (www.wykamol.com).

Biocides are only to be used where they are specifically approved by English Nature and instructions have been specifically confirmed by the Contract Administrator.

2.1.9 Leadwork

All leadwork to comply with the guidelines of the Lead Sheet Association.

Lead to BS1178.

Leadwork should comply with BS6915.

All leadwork is to be carried out by a member of the Lead Contractors Association who specialises in lead roof work and is recognised by the Lead Contractors Association as having a minimum current vetting grade of **GOOD**, but preferably one of **EXCELLENT**.

To minimise the risk of unqualified and/or poor workmanship all leadwork is to be physically carried out by the workforce of the member of the Lead Contractors Association. Under no circumstances is any leadwork to be carried out by a sub-contracted workforce.

All leadwork to be carried out in accordance with the appropriate Lead Sheet Manual of the Lead Sheet Association, unless otherwise specified, and the Historic England and Lead Sheet Association advisory note 'Lead roofs on historic buildings'.

Timbers immediately below leadwork are to remain untreated against timber decay and a chalk slurry is to be applied to the underside of leadwork in contact with any timbers.

Ensure all surfaces to receive leadwork are fully prepared and are clean, dry and smooth with the abutting edges of boards planed level and nails and screws in boarding or rolls to be finished below the surface of the timber.

All nails and metal fixings to be non-ferrous.

Flashings and upstands are to be fixed in position by the lead contractor. The pointing is to be carried out by the Contractor using mortar to match the remaining pointing in colour, texture and workmanship.

All hot work is to be carried out on strict adherence to the provisions of the **HOT WORK PERMIT**.

Refer to **1.34 Fire Precautions**.

2.2 REPAIRS

2.2.1 General

2.2.1.1 Workmanship

The whole of the works is to be executed in the best and most workmanlike manner and with materials of the best description in accordance with the directions and to the satisfaction of the Contract Administrator.

The appropriate sections of work are to be inspected and measured from time to time before being covered up and the Contractor is to give due notice and is to afford every facility to the Contract Administrator for inspecting and checking the work.

2.2.2 Protection

2.2.2.1 General

Allow for the protection of all vulnerable parts of the historic fabric from physical damage during the Contract.

Any damage caused to be made good at the cost of the Contractor to the satisfaction of the Contract Administrator.

2.2.2.2 Protection against the weather

Allow for the protection of all the works against the weather.

Under no circumstances should rainwater be allowed to spill onto the walls and fabric of the structure where masonry and capping repairs have been carried out. Measures to protect the fabric of the structure from rainwater spillage to be provided.

During warm, dry, sunny and/or windy weather, new masonry work and pointing should be kept covered with polythene sheeting and dampened hessian to inhibit the rate of drying out.

During driving rain the finished work should be kept covered with sheeting until set and for a minimum seven days after at the Contract Administrator's discretion.

No masonry work to be carried out when the temperature is below +3°C or below on a falling thermometer or +1°C on a rising thermometer.

All work is to be protected against damage by frost at night by being covered with insulating material (sacking, boarding, etc.).

No masonry work to be carried out when temperature is above + 30°C. All work to be fully protected against direct exposure to the sun, hot temperatures and strong winds by hessian which is to be kept free of the wall and kept regularly dampened down.

Any damage caused by dry, sunny, windy, inclement or frosty weather to work executed under this Contract up to the time of Practical Completion is to be carefully removed and made good at the Contractor's expense.

2.2.3 Removal of impervious cement pointing & mortars

2.2.3.1 General Preparation

- The extent of existing pointing, mortars and masonry to be removed is to be agreed with the Contract Administrator before proceeding with the work.
- Unless specifically and expressly directed by the Contract Administrator no historic mortars or masonry to the church is to be removed.
- The Contractor to provide the Contract Administrator with the names of the operatives who will carry out work on the church. Their competence to be assessed and confirmed by the Contractor Administrator prior to commencement of the relevant works.

2.2.3.2 Method of removal

Test panels to be made for the approval of the Contractor Administrator to confirm the suitability of the materials and workmanship prior to the works/materials being embodied in the finished works.

Only tests panels, methods, materials and mixes given written approval from the Contractor Administrator to be used in the programme of works.

- The tools for removing the cement pointing and mortar to be hand-held disc cutters (to be approved by the Contractor Administrator) and sharpened tungsten tipped chisels. The chisels to be kept sharp and well maintained to facilitate the ease with which the impervious materials can be removed.
- All cement pointing and mortar to be carefully removed by working small areas (no greater than approximately 150 mm x 150 mm) by hand and always working from an edge.
- The cement pointing and mortar to be carefully removed by 'chipping' away, scraping and/or gently lifting with tungsten tipped chisels.
- Great care is to be taken at all times not to damage the adjacent and underlying fabric
- Where the surface of the exposed masonry is found to be decayed all loose material should be carefully removed using a soft bristle brush to provide a surface capable of providing an adequate key to be formed for the repairs.

2.2.3.3 Preparation for repointing

The extent that the existing mortar is to be removed is to be agreed with the Contractor Administrator before proceeding with the work. Preparation to be carried out as follows:

- Under no circumstances are mechanical cutting appliances are to be used on the structure for the removal of pointing.
- Always work from the top of the walls downward.
- Carefully remove hard/cement pointing with sharp chisels.
- All tools used to remove pointing/mortar are to be narrower than the joints.
- Great care is to be taken not to damage masonry.
- Where hard/cement pointing cannot be removed without damaging the masonry it should be left in place.
- Rake out the joints with a blunt screwdriver, or similar instrument, to a depth of at least twice the width of the joint.
- Brush out all loose debris and dust from the raked out joints [**prior to wetting down**].
- Wash out the joints and wet the wall down to reduce the level of initial suction of moisture.
- The masonry to be thoroughly dampened down before re-pointing allowing a period for free water to dry out.
- Repeat dampening down on unpointed areas as the work proceeds as necessary to ensure masonry is damp when re-pointed.

2.2.3.4 Preparation for repointing to fine joints in stonework

Fine Joints not exceeding 5 mm in width

- Rake out joints using fine toothed saw blade or other suitable tool to a depth of 25 mm
- Remove all loose material from the joint by blowing, brushing and washing with clean water.
- Ensure that arrises are not damaged during this operation.
- Flush joint with hypodermic syringe with clean water until water runs clear.
- If cavities are discovered behind pointing a backing rod of twisted, greased string is to be placed into the back of the joint to stop mortar escaping into the structure.

2.2.4 Mortar Recipes

2.2.4.1 Lime putty 'coarse stuff' - pointing & bedding mortar for Ragstone

- 1 x part by volume lime putty
- 1¾ x parts by volume clean well graded Chardstock sand
- 1 x part by volume Guiting
- ¼ x part by volume Taunton Red

The aggregates and lime are to be mixed together to form a coarse stuff at least a week before use and are to be well beaten and thoroughly mixed to ensure a good dispersion of lime and coating of all particles of aggregate.

2.2.4.2 Pointing for Limestone

- 1 x part by volume moderately hydraulic lime [NHL 3.5]
- 2 x parts by volume Wareham sand [sieved]
- 1 x part by volume Guiting

2.2.4.3 Pointing for sandstone

- 1 x part by volume moderately hydraulic lime [NHL 3.5]
- 2 x parts by volume Taunton Red
- 1 x part by volume red brick dust
- 4 x tsp of oxide red pigment
- 3 x tsp of mineral black pigment

2.2.4.4 Sheltercoat mortar mix

A. Limestone:

1 x tub of Rose of Jericho 'Oolitic' sheltercoat
½ x litre x Horton Brown [sieved]
Casein

B. Sandstone:

- 1 x part by volume moderately hydraulic lime [NHL 3.5]
- 2 x parts by volume Taunton Red
- 1 x part by volume red brick dust
- 47 x tsp of oxide red pigment
- 18 x tsp of mineral black pigment
- Casein

2.2.4.5 Paint for sandstone

1 x coat of Keim Restauro fixativ
Up to 4 x coats of Restauro Lasur

To be applied in accordance with manufacturer's/supplier's recommended guidelines:

http://www.keimpaints.co.uk/product_program/natural_stone_repair/restauro_system/our_restauro_system/

2.2.5 Preparation of mortar

2.2.5.1 Preparation of lime putty mortar

Where mortar is mixed on site, mix up enough lime/sand mortar at the start of the contract to complete the work set out in the Schedule of Works.

All coarse-stuff mortar (whether mixed on site or supplied to site) to be stored in plastic tubs (or dustbins) or on timber sheeting and protected from the weather and contamination by polythene sheeting/damp hessian.

All lime putty coarse-stuff to be re-mixed 'knocked-up' again immediately before use to ensure a good dispersion of lime and coating of all particles of aggregate.

2.2.5.2 Preparation of hydraulic lime mortar

The preparation of hydraulic lime mortar is to follow the manufacturer's instructions.

The hydraulic lime mortar mix to be prepared as follows:

- Mix the lime and sand dry to improve the blending of the materials by placing the full measure of hydraulic lime and an equal measure of sand and into the mixer.
- Tap the mixer to free any trapped air within the mix.
- Place the remaining measure of sand into the mixer and mix thoroughly.
- Once the mix is well blended let the dry mix stand for a few minutes and mix again before adding water to achieve a good working consistency. Excess water is to be avoided.
- Allow the mortar to be well mixed before use.

2.2.6 Repointing

Point up raked out joints as follows:

- Press the mortar well into the joints filling all voids.
- Keep the mortar away from the surface of the masonry at all times.
- Pack the joints with mortar.
- Large recesses and voids to be dubbed out and provided with stone and/or clay tile packing/pinnings prior to repointing to pack out the joints as necessary.
- Press the mortar well into the joints filling all voids.
- Apply the mortar ensuring that the mix is well compacted and pressed into position.
- Avoid applying the mortar in deep layers. The mortar to be applied in layers no greater than 25 mm in depth.
- The mortar to be allowed to dry out as slow as possible and to the surface to have carbonated prior to re-pointing.
- Remove excess mortar.
- Use a brush to compact the joint once the mortar starts to set.
- Leave the mortar slightly recessed from the edge of the masonry, exposing sand particles and aggregate to provide a textured finish to match the existing mortars.

2.2.7 Limewashing

- The surfaces to be fully prepared ready for applying the limewash.
- Mix a single batch of pigmented lime putty limewash of a sufficient quantity to apply 5 x coats to specified areas.
- Thoroughly wet down before each coat.
- Apply coats at 24 hour intervals, or longer if necessary (allow full carbonation of each coat before applying the next).

2.2.8 Lime putty slurry coat

- The lime putty slurry to comprise of 1 x part 'coarse stuff' mortar to 6 x parts limewash.
- The slurry coat to be "well-haired".
- Waste from the process of "de-frassing" the ragstone is to be collected for potential use in the slurry mix as a mortar constituent, subject to the findings of the samples and trials.
- The slurry coat to be applied by being thrown onto the wall in a manner similar to a thrown/harled render.
- The surfaces to be fully prepared ready for applying the slurry coat.
- A single batch of the approved/specified lime putty slurry to be mixed of a sufficient quantity to apply 3 x coats to the specified areas.
- Thoroughly wet down before each coat.
- Apply coats at 24 hour intervals, or longer if necessary (allow full carbonation of each coat before applying the next).

2.2.9 “De-frassing” ragstone

Upon completion of carefully removing the cement and weathered pointing carry out the following:

- (a) Carefully pick out and brush back loose/friable mortar from the edges/junctions of adjacent stonework.
- (b) Remove loose and friable material from the ragstone to provide a sound base that can be successfully repaired. This is to be achieved by:
 - Lightly dragging across the face of the ragstone the ‘claws’ of a claw hammer, or similar instrument, and picking with a bolster or similar tool to dislodge loose/friable material to each individual stone.
 - Going over the surface of each individual stone by hand, checking that the face of the stone is sound.
 - Brush down the surface of each individual stone with a stiff churn brush to provide a firm base that is free of loose material and dust.
- (c) Allow for debris from de-frassing of ragstone to be collected for potential use, subject to results of trials, as a mortar constituent for the lime putty slurry coat.

2.2.11 Stone repairs

2.2.11.1 General

- Obtain stone to match existing, which must be free from defects that will affect its workability and free from defects visible in completed work.
- The stone is to be thoroughly seasoned at the time of delivery.
- Cutting, dressing, laying and jointing of stone to be carried out by skilled masons.
- All stainless steel fixings, dowels, pins and cramps are to be Grade 316 Austenitic.

2.2.11.2 Cutting out complete stones for replacement

- Rake out joints using a fine-toothed mason's saw and hooked knife blade.
- Lever stones from position without damage to surrounding work.
- Remove all loose bedding and backing material, fixing dowels and cramps from voids and wash out with clean water.
- Use timber blocks to prop adjacent work where necessary.

2.2.11.3 Cutting out for piecing in or mortar repairs

- Cut out area of decay or spalling back to sound stone using small sharp chisels or sharp saw blades to an approximate depth of 75 mm.
- Cuts are to be raked backwards to form dovetail joints, or if fixing with pins or dowels cut square.
- Cut outs are to be neat with dead flat surfaces to receive new stone, or keyed to receive mortar repairs.
- Remove all loose material from cut out using a bristle brush and wash out with clean water.

2.2.11.4 Preparation of stone for replacement and piecing-in

- Cut stones to full dimensions for bonding with facework and backing.
- Take all necessary measurements and moulds for new stones direct from existing stones to be repaired/replaced or, if stones are missing, from adjacent work.
- Work the exposed and joint face of each stone to a square and true plane surface free from hollow rough areas.
- Prepare stones so that the natural bed is vertical and at right angles to wall face in cornices and other projecting stones, parallel to the radial centre line of each stone, and at right angles to the wall face, in arches.
- Finish new stones on all exposed faces to achieve a plain worked finish to match the original finish of existing stonework. For ragstone the finish is to match the uneven finish of surrounding stones.
- Drill holes for dowels or pins to equal depth in adjacent stones.
- Cut dovetail channels in adjacent stones for cramps.

2.2.11.5 Laying and bonding new and reinstated stones

- Lay and bond new and reinstated stones in the exact position previously occupied.
- Provide stainless steel dowels, pins and cramps as necessary.
- Ensure that bond, joint size and any other special feature are replicated to match existing.
- Flush out voids with clean water.
- Dampen stone for reinstatement/replacement. Spread a mortar bed on the stone and tamp into place using the mortar bedding as a lubricant.
- Pack mortar around the stone when set in position using a suitably sized pointing iron. Push mortar home firmly.
- Set joint slightly back from stone face, or to match existing.
- Where arrises are eroded set joint back to round edge avoiding the creation of ledges that may trap water.
- Match existing surrounding work by stippling with a wet bristle brush following the initial set of the mortar.
- Wash surrounding work with clean water to prevent staining.

2.2.11.6 Piecing-in new stone

- Work the new stone to provide a tight fit into the cavity and dress to a profile matching the surrounding work. New joints are to be of the minimum width necessary to place the repair. Cut 'V' shaped sinkings on joint faces to help the stone grip the backing bed.
- Protect adjacent work to prevent mortar staining.
- As necessary drill holes to receive stainless steel pins or dowels of a suitable size for the repair.
- Remove dust from holes and inject resin or mortar in such a way that air will not be trapped. Pins should be cut to length before injecting resin.

2.2.11.7 Pinning/stitching fractures & cracks in stonework

- Agree size and number of pins before commencing work.
- Drill holes one side of crack through the stone diagonally to receive suitably sized stainless steel threaded rod. Holes are to be oversize in diameter, e.g. 12 mm for 10 mm rod.
- Remove all dust from the holes by blowing and/or flushing out with clean water.
- Cut rod to length, the head of the rod is to be set back into the hole by 20 mm.
- Inject NHL 3.5 hydraulic lime grout into the hole ensuring that no air is trapped at the end of the hole, fill the hole from the deepest point back to the surface.
- Insert the treaded rod by gently pushing and screw twisting it so that surplus grout is driven out of the hole. Collect and remove all surplus grout immediately.
- Once the grout has semi set remove surplus grout from the head of the hole.
- Once the grout is fully set point in the top 20 mm with matching mortar.
- All stainless steel is to be Grade 316 Austenitic.

2.2.12 Removal of biological growth

- Carefully remove biological growth with wooden spatulas, metal scrapers and stiff bristle brushes where this will not cause damage. If the substrate is friable or likely to be damaged remove as much by hand as possible.
- Apply biocide solutions such as Microtech Biocide in accordance with the manufacturer's instructions and the relevant COSHH assessment and other health and safety requirements.
- Following application clean down after 5 days with natural bristle brushes and re-apply biocide to minimise further re-growth.

2.2.13 Removal of atmospheric soiling/sulphation

- Brush down and pre-wet surfaces.
- Apply ammonium carbonate poultice (3-10% dilution) to be applied over lens tissue.
- Poultice medium to be of Arbocell paper and Sepiolite clay (1:1).
- Allow for trials to determine optimum dwell times and chemical concentrations.
- Poultices should be covered with cling film to prevent rapid drying out.
- Remove poultice, clean down surfaces with water and sponge and re-apply as necessary.

The entire removal of all sulphation is neither a realistic nor a desirable objective. The intention is to re-establish the uninterrupted lines of the building's architecture.

2.2.14 Sheltercoat

- Lime shelter coats are to be applied to consolidate friable stone as instructed.
- Consolidate with lime mortar grout to all flakes and exfoliating edges.
- Fill cracks and cavities with lime mortar and 'weather' profile to shed water.
- Apply 1 to 2 applications of shelter coat, carefully colour matched to masonry, to damp surface of stone using a soft bristle brush.
- Compact shelter coat using clean washed hessian.
- Control drying out by spraying with mist of clean water, hanging clean damp hessian over the work and covering with a polythene tarpaulin.
- Do not apply shelter coat if there is a risk of frost.

Specification and Schedule of Repairs
The Church of the Sacred Heart of Jesus - Watlington Street, Reading

Oxley Conservation
November 2016

3 SCHEDULE OF REPAIR

REFER TO SPREADSHEET BELOW FOR THE SCHEDULE OF REPAIR