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GENERAL

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1.0 GENERAL ITEMS

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1.0 GENERAL ITEMS

1.1 Status of This Document

1.2 This schedule of works lists and describes works included in the contract. The Schedule of Works forms part of the Specification for Re-Roofing of the Tower and Transepts, and Associated Works.

1.3 Problems Arising

1.4 The 2018 Quinquennial Inspection identified a building in mixed condition, with a number of parts considered to be in a very poor condition. Roof coverings to Tower and both transepts were failing, and other roofs needed maintenance and repairs. To the masonry, there were a range of problems – some linked to the use of inappropriate 'modern' materials (such as cement) and the current drainage system, others linked to age, and some were structural. The South Transept window head was in a very poor condition. The parapet walls (to the Transepts and to the Tower) were in a poor condition, following rainwater ingress over an extended period of time. Dampness was evident within the fabric (linked to multiple factors including failing roof coverings, rainwater goods- and surfacewater drainage systems, and restrictions to the building fabric ability to manage increased levels of moisture arising. There were a number of health and safety issues arising linked to: access (hatches, ladders, debris, bellframe, poor condition of roofs); loose masonry material to walls, parapets, etc; the risk of trip hazards to floors; the risk of electrical short circuits from rainwater ingress through roofs; fire precautions (some extinguishers are not particularly visible, with locations poor and with inadequate signage); and a potential hazard from the fall of glass from the Tower access stair over the Crossing. A package of temporary, holding repairs has already been put in hand by the PCC in order to address key issues in the short term, but it was always understood that a package of more permanent works was required.

1.5 Brief Description of the Works

1.6 Principally, the scope of the works covers the re-roofing of, and masonry repairs to, the Tower and North- and South transepts, including repairs to the rainwater goods and surfacewater drainage system, and other associated works (including access improvements, measures to address dampness within the fabric, etc).

1.7 EXTERNALLY:

Tower:

- Re-roofing, including replacing existing temporary felt with lead, improving roof ventilation, repairs to timber boarding, gutters, improvements to roof hatch;
- masonry repairs to the elevations, including render repairs and re-rendering, repairs to and replacement of parapet copings, localised rebuilding of masonry (primarily parts of the parapet walls), stone piece repairs/replacement, lime conservation and repairs to dressed Totternhoe stone;
- repairs to the rainwater good system, including part-reconfiguring of downpipes;
- associated minor works including access improvements, work to wind vane, etc;

South Transept:

- Re-roofing including replacing existing temporary felt with stainless steel, improving roof ventilation, repairs to timber boarding, gutters, and provision of roof insulation;

- masonry repairs to the elevations (including repointing, repairs to and replacement of parapet copings, stone piece repairs/replacement, and structural repairs to the window);
- repairs to / replacement of the rainwater goods drainage system, including part-reconfiguring of downpipes;
- associated minor works (including lime conservation work (scratch dial, graffiti);

North Transept:

- Re-roofing including replacing existing temporary felt with stainless steel, improving roof ventilation, repairs to timber boarding, gutters, and provision of roof insulation;
- masonry repairs to the elevations (including repointing, repairs to and replacement of parapet copings, stone piece repairs/replacement, possible structural repairs to window);
- repairs to / replacement of the rainwater goods;
- associated minor works (including some limited lime conservation work);

Other:

- Surfacewater Drainage System – remedial work to address damp problems arising, including removal of existing drainage apron, minor adjustment of ground levels, re-instatement of grass, repairs to existing and provision of additional open gullies, repairs to existing drainage pipework, re-excavation of soakaways, etc;
- Chancel East Gable - minor pointing repairs;
- South Aisle South Doorway - minor repairs to doorway stonework and roof detail;
- North Aisle (West Elevation) - minor (making good) repairs to pipe penetrations;
- Ventilation improvements - overhauling existing vents and provision of new;
- Adjustments to the lightning protection system;

INTERNALLY:

Tower (Upper Levels, Including Tower Stair Passage):

- Access improvements (work to steps, ladders, lighting, roof & floor hatches, etc)
- Minor repairs (including clearing dust/debris, minor pointing repairs, etc)

South Transept:

- Masonry repairs, including structural repairs, localised repairs (stone, plaster, pointing, etc), conservation and repairs (niches, piscina, door opening, aumbry, Tower steps, etc)

Other

- Various work items such as measures to address dampness within walls, localised redecorations/re-staining, check of underfloor void, removal of asbestos containing materials.

1.8 **<u>Conservation-Based Approach</u>**

1.9 A conservation-based approach is proposed, including undertaking targeted work where appropriate, rather than more wholesale repairs. An understanding of the significance of the church as a whole and the historical and aesthetic significance of the elements being repaired has been sought. Good site practice will be required in order to provide safe access and a good working environment, as well as a dry building. The repairs generally will essentially be like-for like repairs using matching, largely traditional, materials. Where a modern material has been employed, this has been in order to address specific challenges. For example, stainless-steel has been specified for the re-roofing of the transepts in order to address an on-going risk of lead theft (the PCC felt the use of lead was an unacceptable risk). However, the detailing of the stainless steel has sought to

reflect and respond to the historic character of the building and its setting, in the use of a terne-coating and in the use of a traditional-style roll detail to side laps.

1.10 **Introduction, Brief Description and Historical Background**

1.11 See Appendices for "Introduction, Brief Description, and Historical Background".

1.12 **Preliminaries**

1.13 Allow for all preliminaries and preambles. Allow for all protection, access equipment, temporary works, shoring and support.

1.14 **Protection**

1.15 Generally - As appropriate, protect all parts of the fabric of the Church. Assume that all fabric is precious and protect it from damage and dust. Minimise dust and noise during the works. Clear away dust and debris as it accumulates. The Church and Churchyard, footpaths and access drive are to be kept clean and tidy at all times. Carefully soft brush down dusty surfaces on completion.

1.16 Protection of the Tower and North- and South Transept roofs - Allow for providing suitable temporary protection against rainwater ingress whilst the repairs are being undertaken. For the provision of a temporary roof as an extra/over item, see "SCAFFOLDING".

1.17 Protection of the Organ – The PCC will arrange for their Organ Builder to visit site and sheet protect the organ (to protect against dust ingress whilst the repairs are being undertaken).

1.18 South Transept Sheeting, etc. - Allow for proving sheeting to the South Arcade, to prevent migration of dust, etc, to the rest of the interior, during the works. Allow also for sheeting furniture, fixtures and fittings where required.

1.19 **Health and Safety**

1.20 Protect all excavations and hazardous areas during the works. Keep the site safe and secure during the works. The site will be a no radios/no personal stereos, and a no smoking site.

1.21 Comply with all relevant Health and Safety regulations including the CDM Regulations 2015 and provide information for the safety plan/file. Allow for addressing the requirements of the CDM Principal Designer's Pre-Construction Health and Safety Plan. See Appendices for a copy of a Designer Hazard Management Register.

1.22 The Principal Contractor is to provide suitable fire-fighting equipment and maintain an emergency evacuation procedure throughout the progress of the works. A competent person should be appointed to act as a fire marshal and the proposed fire emergency procedures are to be described in the Construction Phase Plan. The adopted procedures are to be brought to the attention of all operatives and visitors to the site. In putting together the fire plan, the Principal Contractor is to take notice of and consider any existing arrangements at the church. Ideally, there should be no hot works. However, where the Contractor believes these cannot be avoided, the need for them, along with a robust Hot Work Procedure is to be discussed with the Church Architect.

1.23 **Asbestos**

1.24 When work starts, as a minimum the Contractor working on the project is to have asbestos awareness training to be able to recognise when asbestos is present. A normal, cautious approach in accordance with industry good practice is to be adopted as a matter of course by the Contractor. See Appendices for a copy of the Asbestos Survey. Contractor to contact the PCC direct for the latest information on asbestos, including any Asbestos Management Plan.

1.25 Removal of asbestos containing materials is noted in the Schedule of Works as follow:

- Belfry – Floor (the remains of asbestos containing roof felt debris on the floor); See under OTHER (TOWER BELFRY) in "**INTERIOR ACCOMMODATION**" for work item.
- Nave (by the South Porch) – Redundant Boiler In Floor Pit (the remnants of an asbestos cement flue) to the rear of the redundant boiler to the floor pit. See under OTHER (NAVE) in "**INTERIOR ACCOMMODATION**" for work item.

This work is to be undertaken by licenced asbestos removal specialists. There may be other asbestos on-site not yet identified, so caution will be needed.

1.26 It is not known if the electrical panel have any asbestos containing materials. This is to be checked during the works (licenced asbestos removal contractor to liaise with the Main Contractor's Electrician). Any asbestos containing materials found are to be removed. See under OTHER (SOUTH AISLE) in "**INTERIOR ACCOMMODATION**" for work item.

1.27 **Electricity and Water**

1.28 Electricity and water may be obtained within the Church/Churchyard.

1.29 **Toilet**

1.30 Provide toilet for the workforce, in a position to be agreed on site.

1.31 **Making Good**

1.32 Allow for all making good to match the existing. Reinstate all surfaces on completion.

1.33 **Products and Materials**

1.34 All proprietary products and materials are to be employed in accordance with the manufacturer's recommendations, all codes of practice, etc.

1.35 **Project Information**

1.36 Read the Architect's specification, drawings, etc, and work by other consultants together and allow for all the parts of the work shown, described, and reasonably implied. Notify the Architect of any discrepancies, inconsistencies, etc, immediately. Assume all work is provisional and agree on-site with the Architect.

1.37 **Access and Working Arrangements**

1.38 Liaise with the Parochial Church Council over keys, times of working, cleaning up for services/funerals and other specific occasions, access, location of welfare facilities etc.

1.39 Allow for continued use of the Church (except the South Transept, and upper levels of the Tower) and churchyard generally during the works, including funerals at short notice. Allow for maintaining emergency access through the South Aisle South Door and Chancel South Door.

1.40 All storage of materials is to be agreed beforehand with the Architect and the Parochial Church Council (PCC).

1.41 **As-Built Drawings / Information**

1.42 Upon completion, provide a marked-up copy of the drawings/photographs showing the scope and extent of the works completed, where amended from that specified during the course of the works.

1.43 **Completion**

1.44 Upon completion, allow for removing the sheeting, and brushing down and removing debris from the interior and exterior. Remove scaffolding and leave everything clean, tidy and reinstated at completion.

1.45 **Faculty Approval**

1.46 All work (and hence the acceptance of tenders) is subject to Faculty Approval.

1.47 **Bats**

1.48 In 2021, a specialist consultant ecologist (Dr Duncan Painter, of Applied Ecology, Cambridge) was appointed by the PCC to carry out a preliminary bat roost inspection (this took place in August 2021 and a copy of the report arising is included in the Appendices. The report noted the following:

1.49 *The proposed repair work to the church including the reroofing of the tower and transepts did not appear to pose a significant risk to roosting bats as the work would not obviously block, disturb or damage any obvious crack, crevice or other hole in the building's fabric that could be used by roosting bats.*

1.50 *Given the presence of bats in the church, however, I would recommend that the contractors are briefed at the start of the project as to the potential presence of bats, and to keep a watching brief for bats while undertaking work. Work to remove the existing roof coverings should be completed as carefully as is practicable to minimise the risk of disturbing or injuring a hidden bat below the roof covering or behind any associated lead flashing.*

1.51 *In the event that a bat is found, work should stop in the immediate vicinity of the bat until a licenced bat worker has attended the site to assist.*

1.52 See report for full details.

1.53 It is thought unlikely that bats will be disturbed by the works proposed, and that the work can proceed with caution. If any evidence of bats is found, then further advice will need to be sought from a licenced bat worker before proceeding. The Ecologist notes that there is a slight risk of bats being present as hibernating individual behind lifted plaster, so caution is needed here. However, best working practices and procedures, as outlined below, will still need to be undertaken as a matter of course by the Contractor to help ensure that possible disturbance to bats during the work operations at the church will be avoided.

1.54 Best working practices and procedures include (but are not limited to) the following:

1.55 Awareness - All contractors, workmen and associated parties involved in the works should be aware of the potential for bats to be present and that care and diligence should be applied at all times during working tasks

1.56 Notification - In the event that bats are observed during work operations, work should cease immediately within the area of work and the Contractor should notify the Architect at the same time.

1.57 Inspection - Any deep masonry gap with the dimensions of 15mm by 40mm should first be inspected by torch light so as to confirm if bats are roosting in-side the gap and cavity of the wall. Bats are well-known for using such gaps. In the event that evidence of bat activity (bat droppings, scratch marks, fur, and urine staining) is observed within or around such a gap, then the gap should be left untouched and further advice be sought.

1.58 Caution - The removal of any roofing materials such as slates/tiles, lead sheeting, lead flashing, underboarding and underfelt should be lifted in a slow, controlled manner and as vertically as is safe to do so, as bats may be roosting underneath or between materials.

1.59 **Birds**

1.60 The Contractor is to check for presence of birds as early as possible. Natural England have previously indicated that the nesting period runs from March to August (varying with species), with each nest active for about one month.

1.61 **Archaeology (Field/Building Archaeology)**

1.62 Allow for the following in connection with archaeology.

1.63	**Discoveries**	It is thought unlikely that there will be any archaeological discoveries made (ie. in relation to any excavation or opening-up work). However, if discoveries are made, work in the area of the discovery is to stop immediately and the situation brought to the attention of the Church Architect (who will contact the Diocese and/or the Diocesan Archaeological Advisor).	
1.64	**Liaison and Attendance**	Where required by the Diocesan Archaeological Advisor, allow for liaison with and attendance on an Archaeologist, should this be required. A consultant archaeologist (appointed by Meppershall PCC direct) may be asked to carry out a watching brief for excavation or opening-up work.	
1.65	**General Note**	Please see enclosed "Guidance note for Contractors When Working In Churchyards and Churches".	
1.66	**Provisional Sum**	Allow a provisional sum of £5,000 for any recording work by the Archaeologist	Prov. Sum £5,000

1.67 **Photographic Recording**

1.68 Allow for taking photographs during the works, recording progress, etc. Allow for providing these to the Church Architect. These are considered useful as a resource for future reference for those occasions when the Church Architect and others are not able to visit site.

1.69 **Lime Mortar**

1.70 For pricing purposes, assume lime mortar mixes to be as follows:

1.71 Lime Mortar #1 (Sand/Aggregates) — Mix to be 1 : 3 mix of lime putty : washed, well-graded white sharp sand/aggregates to match existing pointing. Where appropriate, allow for a measure of pozzolan (see below under "Pozzolan"). Allow for providing a sample for approval by the Church Architect prior to works start on site).

1.72 Lime Mortar #2 (Stone Dust) — Mortar to be 1 : 3 mix of lime putty : stone dust to match the existing stonework. Where appropriate, allow for a measure of a pozzolan (see below under "Pozzolan").

1.73 Allow for providing a sample for approval by the Architect before putting the works in hand. Point full and flush. After initial set of mortar brush with a stiff bristle brush to remove laitance and expose aggregate.

1.74 **Lime Plaster**

1.75 For pricing purposes, assume lime plaster mixes to be as follows:

1.76 Lime plaster — Mix generally to be a 1 : 3 lime mix (lime putty : washed, well-graded white sharp/coarse sand/aggregates to match the existing for base and float coats, and a fine sand for finishing coats). Where appropriate, allow for a measure of pozzolan (see below under "Pozzolan"). Apply lime plaster in three coats. Allow for wood float finished to the final coat. Allow for providing a series of samples for approval by the Architect.

1.77 **Lime Render**

1.78 For pricing purposes, assume lime render mixes to be as follows:

1.79 Lime render — Mix generally to be a 1 : 3 lime mix (lime putty : washed, well-graded white sharp/coarse sand/aggregates (to match the new Tower pointing) for base and float coats, and a fine sand for finishing coats). Where appropriate, allow for a measure of pozzolan (see below under "Pozzolan"). Apply lime render in three coats. Allow for wood float finished to the final coat. Allow for providing a series of samples for approval by the Architect.

1.80 **Pozzolan**

1.81 For pricing purposes, assume pozzolan to be pumice powder, or white/buff brick dust (available from The Bulmer Brick and Tile Company, The Brickfields, Bulmer, Sudbury, Suffolk CO10 7EF. Telephone: (01787) 269232. Facsimile: (01787) 269040. Email: bbt@bulmerbrickandtile.co.uk. http://www.bulmerbrickandtile.co.uk).
Allow for 10% by volume for internal work, 20% for external work).

1.82 **Stone Samples**

1.83 Where new stone is to be provided, allow for providing stone samples for approval by the Architect. Stones requiring samples (with correctly worked finish) includes the following:

- Totternhoe stone;

- Clophill-type ironstone;
- Bath stone
- Chicksgrove/Chilmark stone.

1.84 **Lightning Protection System**

1.85 **Allow for a lightning protection system test engineer to visit, inspect, and report on the existing and future system requirements.**

1.86 It is understood that the new roof coverings will need to be bonded to the LPS (to be confirmed by LPS Test Engineer). Rodells Limited, are the PCC's current engineer and so will be familiar with the building. However, if the Contractor wishes to appoint another firm, details are to be supplied at tender stage. Rodells Limited, Cell Barnes House, Cell Barnes Lane, St Albans, Hertfordshire, AL1 5AS. Telephone: (01727) 841855. E-mail: info@rodell-ltd.com Website: www.rodell-ltd.com

1.87 Allow a provisional sum of £2,500 for altering, adapting and, where necessary, extending the existing lightning protection system (LPS) as required by the proposed works and current good practice.

Prov. Sum £2,500

1.88 **Historic Wall Paintings and Polychrome**

1.89 As noted in the individual sections for the Tower Belfry, Tower Sound Deadening Chamber, and South Transept, the areas of plaster affected by the works are not thought likely to contain an historic wall paintings or polychrome (for example, the South Transept plaster is understood to be late-Victorian plaster which is self-coloured and has no paint applied). However, the work described in this Specification will still need to be undertaken with caution by the Main Contractor and any discoveries brought to the attention of the Architect immediately.

1.90 **Contingency Sum**

1.91 Allow for a provisional sum of £30,000 for contingencies.

Contingency Sum £30,000

2.0 SCAFFOLDING

2.1 Scaffolding

2.2 Where scaffolding is required to carry out all or part of the works it is to comply with the following. **IMPORTANT: It is the Contractor's responsibility to assess the extent of scaffolding required and provide a price for this.**

2.3 Allow for providing an independent scaffold appropriate for carrying out the works. Include for maintaining, altering and adapting the scaffolding as necessary for the works and removing on completion. Excessive point loads should not be introduced on any part of the fabric or area of the church or churchyard. Allow for any storage of materials on the scaffold, if required. Loads from the scaffolding are to be distributed at ground level as local conditions dictate. The Contractor is responsible for reviewing with the scaffolding subcontractor at tender stage and for designing the scaffolding to suit local conditions. Use clean-rust free tube, capped at ends facing masonry (with min. 25mm gap between scaffolding & building).

2.4 Hoarding, Ladders, Protection, etc. Externally, enclose the base of the scaffolding (to a height of 3.5m) with clean and tidy metal or timber hoarding. If there is a door in the hoarding, this is to be lockable. Provide debris netting above the hoarding. All ladders must be within the enclosed locked perimeter (or removed at the end of the working day).

2.5 Temporary Roof Allow an extra over price for the provision of a temporary roof to the Tower and the North- and South Transepts (including a temporary rainwater disposal system for the temporary roof and temporary lightning protection system). Allow for any savings arising from the improved working conditions and avoiding the need to protect the roof slopes with tarpaulins each day.

2.6 Lightning Protect. Allow for a temporary lightning protection system.

2.7 Scaffold alarm system Allow an extra/over price for provision of a full scaffold alarm, and erecting clear signage around the scaffold, building and churchyard access points (to give the clear impression that the building and scaffold are protected).

2.8 Health and safety The Contractor will be responsible for all health and safety while scaffolding is being erected and must supervise the scaffolding subcontractor. Members of the public walk through the churchyard and it is paramount that they are kept safe.

2.9 Allow for maintaining emergency access through the building.

2.10	Additional Tender Information Required:	Scaffold erection cost	£……
2.11		Scaffold dismantling cost	£……
2.12		Additional weekly hire cost	£……

ROOFS

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TOWER ROOF

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TOWER ROOF

3.0 DEMOLITIONS, INSPECTION AND REPORTING (TOWER ROOF)

3.1 **Demolitions, Inspection And Reporting**

3.2 **Allow for all demolitions and inspection and reporting to the Architect.**

3.3 **Stripping Existing Roof Covering** — **Allow for stripping the existing temporary felt roof covering.**

3.4 **Inspection** — **Allow for inspection of the existing timber roof structure by the Structural Engineer and Church Architect.**

4.0 TIMBERWORK (TOWER ROOF)

4.1 **Roof Structure Repairs**

4.2 **Provisionally allow for timber repairs and alterations to the Tower roof structure, including any temporary support required. All repairs are provisional.**

4.3 **Wall Plate** — **Provisionally allow for timber piece repairs to the wall plate.** For pricing purposes assume replacement wall plate is in fully-seasoned English Oak, 175x200mm in profile. Assume that an aggregate length of 3,000mm is to be replaced in 3no. 1,000mm sections. New sections are to be half-lapped, fixed with traditional timber pegs. Allow for the use of a damp proof membrane to isolate new timber from what might still be damp masonry. Final details to be confirmed by the Structural Engineer and Architect before putting work in hand.

4.4 **Rafter End Repairs** — **Provisionally allow for replacement of 5no. common rafter ends in seasoned heartwood of European larch.** Profile to match the existing. For pricing purposes, assume the replaced sections are 1500mm long (exact length necessary to be confirmed on site). Allow for traditional jointing to match the existing. Final details to be confirmed by the Structural Engineer and Architect before putting work in hand.

4.5 **Replacement Rafters** — **Provisionally allow for replacing 5no. rafters.** Profile to match the existing. For pricing purposes assume rafters are fully-seasoned heartwood of European larch. Final details to be confirmed by the Structural Engineer and Architect before putting work in hand.

4.6 **Structural Opening (Roof Access Hatch)** — Provisionally allow for complete replacement of the existing access hatch structure.

4.7 **Unforeseen works** — Allow a provisional sum of £2,500 for unforeseen structural works. — Prov. Sum £2,500

4.8 **Roof Boarding Repairs**

4.9 **Allow for providing new timber boarding to the roof.**
For pricing purposes, allow for 25mm boards of untreated Baltic Whitewood (using heartwood, not sapwood), with a square edged. Allow 2mm gap between boards. Fix with stainless steel nails.

4.10 **New Gutter Boarding and Structure (Provisional)**

4.11 **Provisionally allow for providing new timber boarding and structure to the parapet gutters.**

4.12 Allow for repairs where possible but, for pricing purposes, allow for complete replacement of gutter structure and boarding. It is anticipated that some of the timber boarding and structure to the parapet gutter will need to be replaced. Where boarding and structure are serviceable, these are to be retained. However, for pricing purposes, allow for 100% replacement of the gutter boarding and timber structure, to suit the leadwork specified. Minimum drips to be 60mm. Ensure water drains efficiently to sumps, outlets, etc. Note the proposed alterations to the Tower north-west corner rainwater downpipe/outlet. The final scope of the works is to be agreed on-site with the Architect.

4.13 **New Timber Roof Access Hatch**

4.14 **Allow for providing new timber roof hatch, etc, to replace the existing.**

4.15 Allow for providing new traditional timber roof hatch (using timber boarding rather than fibreboard) to replace the existing.
- Allow for a chain stay, etc.
- Allow for a timber pull handle.
- Allow for a large traditional bolt to secure hatch.
- Allow for stainless steel T-hinges. Hinges to be located along the eastern side of the hatch opening, with the chain stay located to the south side of the hatch.
- For covering to new hatch, see under 'New Timber Roof Access Hatch' in COPPERWORK (TOWER ROOF).

4.16 **Handhold For Accessing Roof Via Roof Hatch**

4.17 **Allow for new handhold to improve access through the roof access hatch opening.**

4.18 Allow for new handhold located to the north of the roof hatch opening, secured to the rear of the parapet wall. Allow for providing 1no. horizontal handhold fixed to the rear face of the adjacent North Parapet merlon. Handhold to be simple, purpose-made, U-shaped (with central 45^{o} angle bracket to support underneath, forged stainless-steel handhold, fixed with stainless steel fixings into the internal face of the Belfry east wall. Length: 600mm long. Projection: approx. 300mm. Diameter: 12mm. Heights to be 450mm above the roof slope. Decorate in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: Black

5.0 COPPERWORK (TOWER ROOF)

5.1 **New Timber Roof Access Hatch**

5.2 Allow for traditional copper roof covering to the new Tower roof hatch cover. Fit in accordance with current industry best practice and the manufacturer's recommendations. Where there are any discrepancies, inconsistencies, etc, with the information contained within this Specification, Schedule of Works, and drawings, notify the Architect immediately.

6.0 LEADWORK (TOWER ROOF)

6.1 **New Leadwork to Roof and Parapet Gutters, Sumps, and Outlets**

6.2 **Provide all leadwork to the roof, all flashings, and leadwork to gutters, sumps and outlets.**

6.3 **Leadwork Generally**

Note:
Lead sheet to BS EN 12588 to be fitted in accordance with BS 6915 and the recommendations of the Lead Sheet Training Academy (formerly the Lead Sheet Association) as defined and illustrated in the "Rolled Lead Sheet- The Complete Manual"). Work to be undertaken by a specialist leadworker with experience of work on historic church buildings. Ensure water drains efficiently to sumps, outlets, etc. Lead is to be in sand cast lead: Code 7 for main sheets; and Code 6 for flashings, etc). Where needed, use traditional timber roll detail to match the existing leadwork.

6.4 **Hot Works** **There are to be no hot works.**

6.5 **Underlead Chalk Coating**

Provisionally apply for applying a chalk coating to underside of leadwork
Work to be confirmed with the Architect before being put in-hand. The purpose of this coating is to protect the new lead from the underside lead corrosion. Paint the underside of the lead sheets before laying. The working method generally is to be as follows:

6.6 The underside lead surface of each sheet is to be cleaned and roughened using a bronze wire brush and generally fitted to shape. The sheets should then be stood up and coated with a single coat of chalk emulsion to a depth of 500 micrometers. The coating must be restricted to the equivalent of the 12 o'clock position of a wood-cored roll, just overlapping the top of a lap or drip (to eliminate the possibility of the capillary rise of rainwater round the rolls or up laps or drips into the roof. The lead sheets must be left to thoroughly dry before placing on the roof and final bossing into shape.

6.7 The coating is a proprietary emulsion previously available from

Rowan Technologies Ltd, Urmston, Manchester (Contact on telephone 0161-748-3644). Other manufacturers exist. Use in accordance with the manufacturer's recommendations. Do not use patination oil in the leadwork on the project - chalk and patination oil are incompatible.

6.8 Timber Rolls

Allow for timber rolls to leadwork.

6.9

Supply and install shaped ex-50x50 mm (profile to match the existing) untreated Baltic Whitewood (using heartwood, not sapwood) rolls.

6.10 Underlay

Allow for underlay to leadwork.

6.11

Allow for the supply and fitting of a polyester geotextile felt (not less than 220g/m2) recommended as suitable as underlay to the recommendations set out in the last edition of the Lead Sheet Manual (originally published by the Lead Sheet Association.

6.12 Chute Overflows

Provisionally allow for lead chute overflows.

6.13

Provisionally allow for the following:

- New lead chute overflow to the north-east corner of the Tower, with downspigot to by-pass the existing rainwater hopper (allow for providing new lead cover to the hopper to help prevent building-up o leaf litter, nesting material, etc);
- Re-use of the existing lead chute overflow to the south-east corner of the Tower, integrating this with the new gutter/sump leadwork (note that downspigots will need to fit the diameter of the downpipes below). However, for pricing purposes, allow for complete replacement with new.

New traditional lead overflow chute to be secured to the existing wall with threaded stainless-steel bar, with 600mm projection, internal weir, and downspigots dressed into the associated downpipes. Allow for increasing length of downpipe to suit. Agree detail of chute with the Architect on-site prior to putting the work in-hand.

6.14 Flashings

Provisionally allow for replacing lead flashings around the whole of the roof using code 6 sand cast lead. Where required, form new chases and, where appropriate, allow for use of lead tags screw-fixed with stainless steel screws into the chases, etc. Re-point the joints above the flashings in a lime mortar. Lime mortar to be Lime Mortar #1 (sand/aggregates).

6.15 SmartWater

Allow for applying (Employer-supplied) SmartWater to the roof and parapet gutter leadwork. SmartWater to be applied generally as recommended by the manufacturer/supplier. Note: Apply SmartWater along the lap of the lead sheets (so that two sheets are marked using one brushstroke) in order to

minimise the visual impact – not in the middle of a sheet, where even a 'clear' liquid can still visually disfigure the sheet.

7.0 RAINWATER DRAINAGE (TOWER ROOF)

7.1 **Rainwater Outlet to East and West Parapet Gutters**
7.2 See under TIMBERWORK (TOWER ROOF), and LEADWORK (TOWER ROOF). See also under '**EXTERNAL WALLS'**.

8.0 REDECORATIONS (TOWER ROOF)

8.1 **Wind Vane**
8.2 See under '**EXTERNAL WALLS'**.

8.3 **Iron Bracket Adjacent to Wind Vane**
8.4 See under '**EXTERNAL WALLS**'.
8.5 OTHER (TOWER ROOF)

8.6 **Lightning Protection System**
8.7 See under '**GENERAL ITEMS**'.

SOUTH TRANSEPT ROOF

Section Contents

SOUTH TRANSEPT ROOF

9.0 DEMOLITIONS, INSPECTION AND REPORTING (SOUTH TRANSEPT ROOF)

9.1 **Demolitions, Inspection And Reporting**

9.2 **Allow for all demolitions and inspection and reporting to the Architect.**

9.3 **Stripping Existing Roof Covering** — **Allow for stripping the existing temporary felt roof covering.**

9.4 **Inspection** — **Allow for inspection of the existing timber roof structure by the Structural Engineer and Church Architect.**

10.0 TIMBERWORK (SOUTH TRANSEPT ROOF)

10.1 **Roof Structure Repairs**

10.2 **Provisionally allow for timber repairs and alterations to the South Transept roof structure, including any temporary support required. All repairs are provisional.**

10.3 **Wall Plate** — **Provisionally allow for timber piece repairs to the wall plate.** For pricing purposes assume replacement wall plate is in fully-seasoned English Oak, 175x200mm in profile. Assume that an aggregate length of 3000mm is to be replaced in 3no. 1,000mm sections. New sections are to be half-lapped, fixed with traditional timber pegs. Allow for the use of a damp proof membrane to isolate new timber from what might still be damp masonry. Final details to be confirmed by the Structural Engineer and Architect before putting work in hand.

10.4 **Rafter End Repairs** — **Provisionally allow for replacement of 5no. common rafter ends in seasoned heartwood of European larch.** Profile to match the existing. For pricing purposes, assume the replaced sections are 1500mm long (exact length necessary to be confirmed on site). Allow for traditional jointing to match the existing. Final details to be confirmed by the Structural Engineer and Architect before putting work in hand.

10.5 **Replacement Rafters** — **Provisionally allow for replacing 5no. rafters.** Profile to match the existing. For pricing purposes assume rafters are fully-seasoned heartwood of European larch. Final details to be confirmed by the Structural Engineer and Architect before putting work in hand.

10.6	**Unforeseen works**	Allow a provisional sum of £2,500 for unforeseen structural works.	Prov. Sum £2,500
10.7	**Roof Boarding Repairs**		
10.8	**Allow for providing of selected new timber boarding to the roof.**		
10.9	For pricing purposes, allow for 3m^{2}of 25mm boards of untreated Baltic Whitewood (using heartwood, not sapwood) with a square edged. Allow 2mm gap between boards. Fix with stainless steel nails. For decorations, see under 'INTERNAL REDECORATIONS (SOUTH TRANSEPT)' in '**INTERIOR ACCOMMODATION**'.		
10.10	**New Gutter Boarding and Structure**		
10.11	**Provisionally allow for providing new timber boarding and structure to the parapet gutters.**		
10.12	Allow for repairs where possible but, for pricing purposes, allow for complete replacement of gutter structure and boarding. It is anticipated that some of the timber boarding and structure to the parapet gutters will need to be replaced. Where boarding and structure are serviceable, these are to be retained. However, for pricing purposes, allow for 100% replacement of the gutter boarding and timber structure, to suit the leadwork specified. Minimum drips to be 60mm. Ensure water drains efficiently to sumps, outlets, etc. The final scope of the works is to be agreed on-site with the Architect.		
10.13	**Roof Insulation**		
10.14	**Provisionally allow for insulating roof**.		
10.15	Final detail to be discussed with the Architect on-site.		
10.16	**Insulation #1 / - Sarking (ISOLAIR)**	Allow for 100mm thick ISOLAIR woodfibre insulation/sarking board on top of the existing roof deck. Isolair is a high-performance, vapour-permeable and pressure-resistant insulation/sarking board, and should be fitted in accordance with the manufacturer's recommendations. The board should be laid on top of the existing timber roof boarding. Joints - Butt joints should be tight to ensure no gaps. To abutment with external face of Tower (South Elevation), you will need to cut the top edge of the insulation/sarking board at an angle to ensure a close fit with the masonry (you may need to apply a lime parge coat in order to ensure a flat surface).	
10.17		It is understood that the following accessories will be required: STRH fixings – these thermally broken washer / self-tapping fixings are to be used to secure the Isolair to the roof deck (please ensure that fixings line with the rafters below); Pavaflex PAVATAPE 150 – to be used to seal the Isolair with the timber eaves batten/stop, and with the masonry abutments to head and both ends of the roof (you may need to apply a lime parge coat to the masonry prior to fitting tape in order to ensure a flat surface; Pavaflex PAVAPRIM – to be used to aid the use of the Pavatape; Pavaflex PAVACOLL – to be used to seal the T&G joints.	

10.18 For the nearest stockist/supplier, contact Unity Lime (Bucks). The Hangar, Worminghall Road, Oakley, Buckinghamshire, HP18 9UL.
E-mail: technical@unitylime.co.uk
Website: w: www.unitylime.co.uk
Telephone: (01904) 405797

10.19 **Insulation#2 (PAVAFLEX) and Fascia/Boarding** PAVAFLEX flexible woodfibre insulation should be fitted in accordance with the manufacturer's recommendations. The insulation should be fitted snugly (no air gaps) between the rafter feet (in 2no. vertical layers), at the bottom of the roof slope, above the wall plate.

10.20 For the nearest stockist/supplier, contact Unity Lime (Bucks) – see above.

10.21 **New Ventilated Roof Deck**

10.22 **Provisionally allow for new ventilated roof deck**

10.23 **Roof Boarding** **Allow for new timber boarding.**
Boarding to be untreated 25mm thick untreated Whitewood (using heartwood, not sapwood), fixed with st. steel fixings.

10.24 **Counter-Battens** **Allow for counter-battens on top of the insulation.**
Counter-battens to be 50x50mm untreated heartwood of European larch or Douglas Fir. Battens to line exactly with the existing rafters below. Allow for stainless steel screw fixings.

10.25 **Ventilation** **Form new linear abutment ventilation details at head abutment and eaves, venting the air layer between the battens.**
Ventilator available from: Nicholson Roof Products www.nicholsonsts.com, info@nicholsonsts.com. Telephone: (01763) 295828. See Appendices for Nicholson technical details. Allow for all builder's work, materials, etc, in connection with fitting these ventilators (eg. timber battens, stainless steel fixings, etc).

10.26 **Abutment Ventilation -** Nicholson Airtrak AB5-FR Fire Resisting Abutment Ventilator for hard metal roofing. Ventilator to provide continuous ventilation along eaves. Allow for Nicholson AIRTRAK 'Clipfast' system to restrain bottom edge of lead flashing.

10.27 **Eaves Ventilation -** Nicholson Airtrak EA120-FR Fire Resisting Eaves Ventilator Ventilator. Ventilator to provide continuous ventilation along eaves. AIRTRAK 'Clipfast' system to restrain bottom edge of lead flashing.

10.28 **Underlay** Provisionally allow for underlay to new insulation/sarking board. Underlay to be unrolled black poster/sugar paper. Allow for paper to be unrolled (across the width of the roof),

then lapped and taped. Paper to sit on top of the existing timber roof deck.

10.29 **Eaves Battens/-Upstands (Edge of Isolair Board Insulation)**

Allow for an ex-50x100mm timber batten/upstand to the bottom and side edges of the insulation layer (at the eaves and verges).
This will function as a stop for the insulation board, provide a location for fixing the AIRTRAK EA-120-FR Eaves Ventilator, and provide an upstand for the lead gutter sheets (to both parapet and verge gutter).

11.0 STAINLESS STEEL ROOF COVERING (SOUTH TRANSEPT ROOF)

11.1 **Stainless Steel Roof Covering**

11.2 **Allow for finishing the roof using terne-coated stainless steel system, with standing seams and associated details, etc. Please note, an extra/over option for roll and cap detail (to mimic a traditional lead roof) is noted separately below.**

11.3 **Generally**

Supply and install new terne-coated stainless steel sheet roofing system to replace the previous finish. System to be Uginox terne-coated stainless steel roofing system (or equal and approved). Fit in accordance with current industry best practice and the manufacturer's recommendations. Where there are any discrepancies, inconsistencies, etc, with the information contained within this Specification, Schedule of Works, and drawings, notify the Architect immediately. Provide sample prior to putting the works in hand. System available from ALM HM – Associated Lead Mills Limited, Unit B, Bingley Road, Hoddesdon, Hertfordshire, EN11 0NX. Telephone: (01992) 801927. E-mail: sales@uginox.co.uk. If the Contractor wishes to employ a different system, details are to be provided at tender stage.

11.4 **Gauge**

Gauge to be 0.4mm thick grade 316L (EN reference 1.4404) or grade K44 (EN reference 1.4521).

11.5 **Bay Width/Length**

Ideally, the bay width will be approximately 530-550mm, to match a traditional lead roofing system (precise dimension of bay width to be confirmed following discussions between Architect and chosen roofing contractor before works are put in hand). Note, the east and west end walls of the South Transept may not be parallel – the Contractor is to check and discuss with the Architect how this aspect is to be detailed. Bay to run the full length of the roof slope to suit eaves and head abutment details, etc.

11.6 **Upstands**

To side abutments with South Transept east and west parapet walls, and to head abutment with the Tower (South Elevation), allow for appropriate upstands for weathering.

11.7	**Underlay**	Allow for Metmat Acoustic Felt underlay (in accordance with manufacturers recommendations). Underlay to act as a cushioning / sound deadening layer.
11.8	**Flashings**	See under "Leadwork".
11.9	**Tower Abutment Stone Weathering**	**Provisionally allow for providing new stone weathering.** Provisionally allow for providing new stone weathering above the chase for the flashing. Allow for removing and re-using the existing ('modern') section of stone weathering.
11.10	**Timber Roll Detail**	Allow for using timber rolls and stainless steel caps in order to mimic a traditional lead roof. Rolls to be a shaped ex-50 x 50 mm softwood (using heartwood, not sapwood), profile generally to match a timber roll for a traditional lead roof. Allow for end cap detail at eaves.

12.0 LEADWORK (SOUTH TRANSEPT ROOF)

12.1 **<u>New Leadwork to Parapet Gutters, Sumps, and Outlets</u>**

12.2 **Provide all leadwork to gutters, sumps and outlets and associated flashings.**

12.3	**Leadwork**	**Note:**
12.4	**Generally**	Lead sheet to BS EN 12588 to be fitted in accordance with BS 6915 and the recommendations of the Lead Sheet Training Academy (formerly the Lead Sheet Association) as defined and illustrated in the "Rolled Lead Sheet- The Complete Manual"). Work to be undertaken by a specialist leadworker with experience of work on historic church buildings. Ensure water drains efficiently to sumps, outlets, etc. Lead is to be in sand cast lead: Code 7 for main sheets; and Code 6 for flashings, etc). Where needed, use traditional timber roll detail to match the existing leadwork.
12.5	**Hot Works**	**There are to be no hot works.**
12.6	**Underlead Chalk Coating**	**Provisionally apply for applying a chalk coating to underside of leadwork** Work to be confirmed with the Architect before being put in-hand. The purpose of this coating is to protect the new lead from the underside lead corrosion. Paint the underside of the lead sheets before laying. The working method generally is to be as follows:
12.7		The underside lead surface of each sheet is to be cleaned and roughened using a bronze wire brush and generally fitted to shape. The sheets should then be stood up and coated with a single coat of chalk emulsion to a depth of 500 micrometers. The

		coating must be restricted to the equivalent of the 12 o'clock position of a wood-cored roll, just overlapping the top of a lap or drip (to eliminate the possibility of the capillary rise of rainwater round the rolls or up laps or drips into the roof. The lead sheets must be left to thoroughly dry before placing on the roof and final bossing into shape.
12.8		The coating is a proprietary emulsion previously available from Rowan Technologies Ltd, Urmston, Manchester (Contact on telephone 0161-748-3644). Other manufacturers exist. Use in accordance with the manufacturer's recommendations. Do not use patination oil in the leadwork on the project - chalk and patination oil are incompatible.
12.9	**Underlay**	**Allow for underlay to leadwork.**
12.10		Allow for the supply and fitting of a polyester geotextile felt (not less than 220g/m2) recommended as suitable as underlay to the recommendations set out in the last edition of the Lead Sheet Manual (originally published by the Lead Sheet Association.
12.11	**Chute Overflows**	**Provisionally allow for lead chute overflows.**
12.12		Provisionally allow for e-use of the existing lead chute overflows, integrating these with the new gutter/sump leadwork (note that downspigots will need to fit the diameter of the downpipes below). However, for pricing purposes, allow for complete replacement with new. New traditional lead overflow chute to be secured to the existing wall with threaded stainless-steel bar, with 450mm projection, internal weir, and downspigots dressed into the associated downpipes. Allow for increasing length of downpipe to suit. Agree detail of chute with the Architect on-site prior to putting the work in-hand.
12.13	**Flashings**	Provisionally allow for replacing lead flashings around the whole of the roof using code 6 sand cast lead. Where required, form new chases and, where appropriate, allow for use of lead tags screw-fixed with stainless steel screws into the chases, etc. Re-point the joints above the flashings in a lime mortar. Lime mortar to be Lime Mortar #1 (sand/aggregates).
12.14		**Allow for providing new stone weathering.**

	Tower Abutment Stone Weathering	Allow for providing new stone weathering above the chase for the flashing (re-using the salvaged section from the east roof slope in a slightly different position).
12.15	**SmartWater**	Allow for applying (Employer-supplied) SmartWater to the roof and parapet gutter leadwork. SmartWater to be applied generally as recommended by the manufacturer/supplier. Note: Apply SmartWater along the lap of the lead sheets (so that two sheets are marked using one brushstroke) in order to minimise the visual impact – not in the middle of a sheet, where even a 'clear' liquid can still visually disfigure the sheet.
12.16	**Re-positioning of Sump and Outlet to RW Downpipe (to East Elevation)**	Allow for alterations to sump and outlet to enable re-positioning eastern downpipe (to avoid awkward juxtaposition with Tower Stair East Light). For new position, see drawings.

13.0 RAINWATER DRAINAGE (SOUTH TRANSEPT ROOF)

13.1 **Rainwater Outlet to East and West Parapet Gutters**

13.2 See under TIMBERWORK (SOUTH TRANSEPT ROOF), and LEADWORK (SOUTH TRANSEPT ROOF). See also under '**EXTERNAL WALLS'**.

14.0 REDECORATIONS (SOUTH TRANSEPT ROOF)

14.1 **Lightning Protection System**

14.2 See under '**MISCELLANEOUS**'.

NORTH TRANSEPT ROOF

Section Contents

NORTH TRANSEPT ROOF

15.0 DEMOLITIONS, INSPECTION AND REPORTING (NORTH TRANSEPT ROOF)

15.1 **Demolitions, Inspection And Reporting**

15.2 **Allow for all demolitions and inspection and reporting to the Architect.**

15.3 **Stripping Existing Roof Covering** — **Allow for stripping the existing temporary felt roof covering.**

15.4 **Inspection** — **Allow for inspection of the existing timber roof structure by the Structural Engineer and Church Architect.**

16.0 TIMBERWORK (NORTH TRANSEPT ROOF)

16.1 **Roof Structure Repairs**

16.2 **Provisionally allow for timber repairs and alterations to the North Transept roof structure, including any temporary support required. All repairs are provisional.**

16.3 **Wall Plate** — **Provisionally allow for timber piece repairs to the wall plate.** For pricing purposes assume replacement wall plate is in fully-seasoned English Oak, 175x200mm in profile. Assume that an aggregate length of 3000mm is to be replaced in 3no. 1,000mm sections. New sections are to be half-lapped, fixed with traditional timber pegs. Allow for the use of a damp proof membrane to isolate new timber from what might still be damp masonry. Final details to be confirmed by the Structural Engineer and Architect before putting work in hand.

16.4 **Rafter End Repairs** — **Provisionally allow for replacement of 5no. common rafter ends in seasoned heartwood of European larch.** Profile to match the existing. For pricing purposes, assume the replaced sections are 1500mm long (exact length necessary to be confirmed on site). Allow for traditional jointing to match the existing. Final details to be confirmed by the Structural Engineer and Architect before putting work in hand.

16.5 **Replacement Rafters** — **Provisionally allow for replacing 5no. rafters.** Profile to match the existing. For pricing purposes assume rafters are fully-seasoned heartwood of European larch. Final details to be confirmed by the Structural Engineer and Architect before putting work in hand.

16.6	**Unforeseen works**	Allow a provisional sum of £2,500 for unforeseen structural works.	Prov. Sum £2,500
16.7	**Roof Boarding Repairs**		
16.8	**Allow for providing of selected new timber boarding to the roof.**		
16.9	For pricing purposes, allow for 3m^{2}of 25mm boards of untreated Baltic Whitewood (using heartwood, not sapwood) with a square edged. Allow 2mm gap between boards. Fix with stainless steel nails. For decorations, see under 'INTERNAL REDECORATIONS (NORTH TRANSEPT)' in '**INTERIOR ACCOMMODATION**'.		
16.10	**New Gutter Boarding and Structure**		
16.11	**Provisionally allow for providing new timber boarding and structure to the parapet gutters.**		
16.12	Allow for repairs where possible but, for pricing purposes, allow for complete replacement of gutter structure and boarding. It is anticipated that some of the timber boarding and structure to the parapet gutters will need to be replaced. Where boarding and structure are serviceable, these are to be retained. However, for pricing purposes, allow for 100% replacement of the gutter boarding and timber structure, to suit the leadwork specified. Minimum drips to be 60mm. Ensure water drains efficiently to sumps, outlets, etc. The final scope of the works is to be agreed on-site with the Architect.		
16.13	**Roof Insulation**		
16.14	**Provisionally allow for insulating roof**.		
16.15	See details below.		
16.16	**Insulation #1 / - Sarking (ISOLAIR)**	Allow for 100mm thick ISOLAIR woodfibre insulation/sarking board on top of the existing roof deck. Isolair is a high-performance, vapour-permeable and pressure-resistant insulation/sarking board, and should be fitted in accordance with the manufacturer's recommendations. The board should be laid on top of the existing timber roof boarding. Joints - Butt joints should be tight to ensure no gaps. To abutment with external face of Tower (North Elevation), you will need to cut the top edge of the insulation/sarking board at an angle to ensure a close fit with the masonry (you may need to apply a lime parge coat in order to ensure a flat surface).	
16.17		It is understood that the following accessories will be required: STRH fixings – these thermally broken washer / self-tapping fixings are to be used to secure the Isolair to the roof deck (please ensure that fixings line with the rafters below); Pavaflex PAVATAPE 150 – to be used to seal the Isolair with the timber eaves batten/stop, and with the masonry abutments to head and both ends of the roof (you may need to apply a lime parge coat to the masonry prior to fitting tape in order to ensure a flat surface; Pavaflex PAVAPRIM – to be used to aid the use of the Pavatape; Pavaflex PAVACOLL – to be used to seal the T&G joints.	

16.18 For the nearest stockist/supplier, contact Unity Lime (Bucks). The Hangar, Worminghall Road, Oakley, Buckinghamshire, HP18 9UL.
E-mail: technical@unitylime.co.uk
Website: w: www.unitylime.co.uk
Telephone: (01904) 405797

16.19 **Insulation#2 (PAVAFLEX) and Fascia/Boarding** PAVAFLEX flexible woodfibre insulation should be fitted in accordance with the manufacturer's recommendations. The insulation should be fitted snugly (no air gaps) between the rafter feet (in 2no. vertical layers), at the bottom of the roof slope, above the wall plate.

16.20 For the nearest stockist/supplier, contact Unity Lime (Bucks) – see above.

16.21 **New Ventilated Roof Deck**

16.22 **Provisionally allow for new ventilated roof deck**

16.23 **Roof Boarding** **Allow for new timber boarding.**
Boarding to be untreated 25mm thick untreated Whitewood (using heartwood, not sapwood), fixed with st. steel fixings.

16.24 **Counter-Battens** **Allow for counter-battens on top of the insulation.**
Counter-battens to be 50x50mm untreated heartwood of European larch or Douglas Fir. Battens to line exactly with the existing rafters below. Allow for stainless steel screw fixings.

16.25 **Ventilation** **Form new linear abutment ventilation details at head abutment and eaves, venting the air layer between the battens.**
Ventilator available from: Nicholson Roof Products www.nicholsonsts.com, info@nicholsonsts.com. Telephone: (01763) 295828. See Appendices for Nicholson technical details. Allow for all builder's work, materials, etc, in connection with fitting these ventilators (eg. timber battens, stainless steel fixings, etc).

16.26 **Abutment Ventilation -** Nicholson Airtrak AB5-FR Fire Resisting Abutment Ventilator for hard metal roofing. Ventilator to provide continuous ventilation along eaves. Allow for Nicholson AIRTRAK 'Clipfast' system to restrain bottom edge of lead flashing.

16.27 **Eaves Ventilation -** Nicholson Airtrak EA120-FR Fire Resisting Eaves Ventilator Ventilator. Ventilator to provide continuous ventilation along eaves. AIRTRAK 'Clipfast' system to restrain bottom edge of lead flashing.

16.28 **Underlay** Provisionally allow for underlay to new insulation/sarking board. Underlay to be unrolled black poster/sugar paper. Allow for paper to be unrolled (across the width of the roof),

then lapped and taped. Paper to sit on top of the existing timber roof deck.

16.29 **Eaves Battens/-Upstands (Edge of Isolair Board Insulation)** **Allow for an ex-50x100mm timber batten/upstand to the bottom and side edges of the insulation layer (at the eaves and verges).** This will function as a stop for the insulation board, provide a location for fixing the AIRTRAK EA-120-FR Eaves Ventilator, and provide an upstand for the lead gutter sheets (to both parapet and verge gutter).

17.0 STAINLESS STEEL ROOF COVERING (NORTH TRANSEPT ROOF)

17.1 **Stainless Steel Roof Covering**

17.2 **Allow for finishing the roof using terne-coated stainless steel system, with standing seams and associated details, etc. Please note, an extra/over option for roll and cap detail (to mimic a traditional lead roof) is noted separately below.**

17.3 **Generally** Supply and install new terne-coated stainless steel sheet roofing system to replace the previous finish. System to be Uginox terne-coated stainless steel roofing system (or equal and approved). Fit in accordance with current industry best practice and the manufacturer's recommendations. Where there are any discrepancies, inconsistencies, etc, with the information contained within this Specification, Schedule of Works, and drawings, notify the Architect immediately. Provide sample prior to putting the works in hand. System available from ALM HM – Associated Lead Mills Limited, Unit B, Bingley Road, Hoddesdon, Hertfordshire, EN11 0NX. Telephone: (01992) 801927. E-mail: sales@uginox.co.uk. If the Contractor wishes to employ a different system, details are to be provided at tender stage.

17.4 **Gauge** Gauge to be 0.4mm thick grade 316L (EN reference 1.4404) or grade K44 (EN reference 1.4521).

17.5 **Bay Width/Length** Ideally, the bay width will be approximately 530-550mm, to match a traditional lead roofing system (precise dimension of bay width to be confirmed following discussions between Architect and chosen roofing contractor before works are put in hand). Note, the east and west end walls of the South Transept may not be parallel – the Contractor is to check and discuss with the Architect how this aspect is to be detailed. Bay to run the full length of the roof slope to suit eaves and head abutment details, etc.

17.6 **Upstands** To side abutments with the North Transept east and west parapet walls, and to head abutment with the Tower (North Elevation), allow for appropriate upstands for weathering.

17.7	**Underlay**	Allow for Metmatt Acoustic Felt underlay (in accordance with manufacturers recommendations). Underlay to act as a cushioning / sound deadening layer.
17.8	**Flashings**	See under "Leadwork".
17.9	**Timber Roll Detail**	Allow for using timber rolls and stainless steel caps in order to mimic a traditional lead roof. Rolls to be a shaped ex-50 x 50 mm softwood (using heartwood, not sapwood), profile generally to match a timber roll for a traditional lead roof. Allow for end cap detail at eaves.

18.0 LEADWORK (NORTH TRANSEPT ROOF)

18.1 **<u>New Leadwork to Parapet Gutters, Sumps, and Outlets</u>**

18.2 **Provide all leadwork to gutters, sumps and outlets and associated flashings.**

18.3	**Leadwork**	**Note:**
18.4	**Generally**	Lead sheet to BS EN 12588 to be fitted in accordance with BS 6915 and the recommendations of the Lead Sheet Training Academy (formerly the Lead Sheet Association) as defined and illustrated in the "Rolled Lead Sheet- The Complete Manual"). Work to be undertaken by a specialist leadworker with experience of work on historic church buildings. Ensure water drains efficiently to sumps, outlets, etc. Lead is to be in sand cast lead: Code 7 for main sheets; and Code 6 for flashings, etc). Where needed, use traditional timber roll detail to match the existing leadwork.
18.5	**Hot Works**	**There are to be no hot works.**
18.6	**Underlead Chalk Coating**	**Provisionally apply for applying a chalk coating to underside of leadwork** Work to be confirmed with the Architect before being put in-hand. The purpose of this coating is to protect the new lead from the underside lead corrosion. Paint the underside of the lead sheets before laying. The working method generally is to be as follows:
18.7		The underside lead surface of each sheet is to be cleaned and roughened using a bronze wire brush and generally fitted to shape. The sheets should then be stood up and coated with a single coat of chalk emulsion to a depth of 500 micrometers. The coating must be restricted to the equivalent of the 12 o'clock position of a wood-cored roll, just overlapping the top of a lap or drip (to eliminate the possibility of the capillary rise of rainwater round the rolls or up laps or drips into the roof. The lead sheets must be left to thoroughly dry before placing on the roof and

		final bossing into shape.
18.8		The coating is a proprietary emulsion previously available from Rowan Technologies Ltd, Urmston, Manchester (Contact on telephone 0161-748-3644). Other manufacturers exist. Use in accordance with the manufacturer's recommendations. Do not use patination oil in the leadwork on the project - chalk and patination oil are incompatible.
18.9	**Underlay**	**Allow for underlay to leadwork.**
18.10		Allow for the supply and fitting of a polyester geotextile felt (not less than 220g/m2) recommended as suitable as underlay to the recommendations set out in the last edition of the Lead Sheet Manual (originally published by the Lead Sheet Association.
18.11	**Chute Overflows**	**Provisionally allow for lead chute overflows.**
18.12		Provisionally allow for e-use of the existing lead chute overflows, integrating these with the new gutter/sump leadwork (note that downspigots will need to fit the diameter of the downpipes below). However, for pricing purposes, allow for complete replacement with new. New traditional lead overflow chute to be secured to the existing wall with threaded stainless-steel bar, with 450mm projection, internal weir, and downspigots dressed into the associated downpipes. Allow for increasing length of downpipe to suit. Agree detail of chute with the Architect on-site prior to putting the work in-hand.
18.13	**Flashings**	**Provisionally allow for replacement lead flashings.**
18.14		Provisionally allow for replacing lead flashings around the whole of the roof using code 6 sand cast lead. Where required, form new chases and, where appropriate, allow for use of lead tags screw-fixed with stainless steel screws into the chases, etc. Re-point the joints above the flashings in a lime mortar. Lime mortar to be Lime Mortar #1 (sand/aggregates).
18.15	**Tower Abutment Stone Weathering**	**Allow for providing new stone weathering.** Allow for providing new stone weathering above the chase for the flashing
18.16	**SmartWater**	Allow for applying (Employer-supplied) SmartWater to the roof and parapet gutter leadwork. SmartWater to be applied generally as recommended by the manufacturer/supplier.

Note: Apply SmartWater along the lap of the lead sheets (so that two sheets are marked using one brushstroke) in order to minimise the visual impact – not in the middle of a sheet, where even a 'clear' liquid can still visually disfigure the sheet.

18.17 **Rainwater Catcher/-Diverter** To the base of the relocated rainwater downpipe, allow for new purpose-made catcher/diverter To North Transept Roof. Catcher/diverter to be designed to efficiently control discharge into the parapet gutter, and avoid trapping/retaining leaf litter, etc). Allow for agreeing detail with the architect on-site.

19.0 RAINWATER DRAINAGE (NORTH TRANSEPT ROOF)

19.1 **Rainwater Outlet to East and West Parapet Gutters**

19.2 See under TIMBERWORK (NORTH TRANSEPT ROOF), and LEADWORK (NORTH TRANSEPT ROOF). See also under '**EXTERNAL WALLS'**.

20.0 REDECORATIONS (NORTH TRANSEPT ROOF)

20.1 **Lightning Protection System**

20.2 See under '**GENERAL ITEMS**'.

NAVE ROOF (ABUTMENT WITH TOWER)

21.0 MINOR REPAIRS (NAVE ROOF)

21.1 **Roof Repairs**

Provisionally allow for pointing repairs to roof abutment with Tower.
Provisionally allow for pointing repairs to the roof abutment detail with the Tower. For pricing purposes, assume 3 linear metres of pointing. Lime mortar to be Lime Mortar #1 (sand/aggregates).

21.2 **Provisionally allow for minor tiling maintenance close to roof abutment with tower**
For pricing purposes, allow for the replacement of 10no. roof tiles in tile to match the existing (in size, tile type, colour, texture, etc).

SOUTH AISLE ROOF (ABUTMENT WITH SOUTH TRANSEPT)

22.0 MINOR REPAIRS (SOUTH AISLE ROOF)

22.1 **Roof Repairs (Abutment With South Transept)**

Provisionally allow for pointing repairs to roof abutment with South Transept.
Provisionally allow for pointing repairs to the roof abutment detail with the South Transept.
For pricing purposes, assume 3 linear metres of pointing. Lime mortar to be Lime Mortar #1 (sand/aggregates).

22.2 **Provisionally allow for minor tiling maintenance close to roof abutment with South Transept.**
For pricing purposes, allow for the replacement of 3no. roof tiles in tile to match the existing (in size, tile type, colour, texture, etc).

22.3 **Roof Repairs (Abutment With South Porch)**

Provisionally allow for reconfiguring roof abutment details with masonry of South Porch south projection. — Prov. Sum £500

Allow for reconfiguring the existing details at the base of the roof valleys. It is anticipated that lead soakers will be required. Roofer to propose robust remedial detail. Any new lime mortar is to be Lime Mortar #1 (sand/aggregates). For pricing purposes, allow a provisional sum of £500. Final detail to be agreed on-site with the Architect

NORTH AISLE ROOF (ABUTMENT WITH NORTH TRANSEPT)

23.0 MINOR REPAIRS (NORTH AISLE ROOF)

23.1 **Roof Repairs**

Provisionally allow for pointing repairs to roof abutment with North Transept.

Provisionally allow for pointing repairs to the roof abutment detail with the North Transept.

For pricing purposes, assume 1 linear metre of pointing. Lime mortar to be Lime Mortar #1 (sand/aggregates).

23.2 **Provisionally allow for minor tiling maintenance close to roof abutment with North Transept**

For pricing purposes, allow for the replacement of 3no. roof tiles in tile to match the existing (in size, tile type, colour, texture, etc).

CHANCEL ROOF (ABUTMENT WITH TOWER)

24.0 MINOR REPAIRS (CHANCEL ROOF)

24.1 **Roof Repairs**

Provisionally allow for pointing repairs to roof abutment with Tower.

Provisionally allow for pointing repairs to the roof abutment detail with the Tower. For pricing purposes, assume 3 linear metres of pointing. Lime mortar to be Lime Mortar #1 (sand/aggregates).

24.2 **Provisionally allow for minor tiling maintenance close to roof abutment with tower**

For pricing purposes, allow for the replacement of 20no. roof tiles in tile to match the existing (in size, tile type, colour, texture, etc).

EXTERNAL WALLS

Contents:

TOWER (PARAPET WALLS) - ALL FOUR ELEVATIONS

Section Contents

TOWER (PARAPET WALLS) - ALL FOUR ELEVATIONS

25.0 MASONRY REPAIRS (TOWER PARAPET WALLS)

25.1 **Copings**

25.2 **Allow for repairs to the parapet wall copings.**

25.3 Allow for removing the existing, failing, rendered or cast concrete copings to merlons and the tiled or renders or cast copings to the embrasures.

25.4 **Merlons** (Solid part of the crenelated parapet)

Provisionally allow for replacing the copings to the merlons. Coping/parapet wall detail to match the existing. Allow for replacing in limestone in profile to match the existing. For pricing purposes, assume limestone to be pale cream/white Chicksgrove/Chilmark stone, finished with a hand drag to remove any saw marks. Allow for stone dowels or stainless steel pins to locate coping into walltop. Allow for bedding in lime mortar - Lime mortar #1 (sand/aggregates). Profile to match the existing.

25.5 **Embrasures** (Openings between the merlons)

Provisionally allow for replacing the tiled, or failing, rendered or cast concrete copings to the embrasures. Coping/wall detail generally to match the merlon copings. However, note that the nosing/drip to the front elevation extends beyond the face of cheek (confirm with the Church Architect on-site before the works are put in hand).

25.6 **Re-Render Parapet Walls**

25.7 **Allow for re-rendering the parapet walls (inside & out) incl. associated repairs.**

25.8 It is anticipated that significant rebuilding of the parapet wall will be required (due to the presence of a hard cement render and long-term rainwater ingress into the wall).

25.9 **Remove render**

Allow for removing the existing hard, cementitious render to inside and outside faces.

25.10 **Masonry repairs**

Allow for masonry repairs to the wall core. Where the existing parapet walls are found to be in reasonable condition, they are to be retained, and re-rendered (see note below). However, for pricing purposed, assume the walls are in a poor condition and allow for complete re-building, down to parapet stringcourse level.

25.11

Wall Materials - Allow for reuse of the existing (which may include a mix of some or all of: ironstone rubble, cobbles and fieldstones, clunch face-dressed rubble, red clay bricks, red clay tiles, etc), but provisionally allow for 25% replacement of masonry in matching material (local ironstone rubble, with some cobbles and fieldstone, clunch dressed rubble. Contractor to confirm in-site. Profile and

		construction of the rebuilt wall is to match the existing.	
25.12		Lime mortar - Lime mortar #1 (sand/aggregates).	
25.13	**Re-rendering**	**Allow re-rendering the front and rear faces of the parapet walls.** For lime render mix, see under "**GENERAL ITEMS**".	
25.14		**Provisionally allow for modelling the render to give the impression of stone coursing to the render.** Allow for providing a sample for approval by the Architect.	
25.15	**Parapet Stringcourse**		
25.16	**Allow for repairs to the parapet stringcourse.**		
25.17	The existing parapet stringcourse is believed to be constructed of rendered masonry, which is now failing. There are two options for repair.		
25.18	**Inspection**	Inspection – Allow for checking over the stringcourse to all elevations of the Tower and reporting condition to the Architect. Allow for removing loose material as required.	
25.19	**Repairs**	Lime render repairs – Allow for lime render repairs. For mix, see 'Lime Render' under "**GENERAL ITEMS**". Profile, surface texture, and colour of the finished render is to match the existing . Allow for providing a series of samples for approval by the Architect on-site. Provisionally allow for stainless steel armature for new work.	
25.20		Lead drip – Allow for providing new lead drip to stringcourse. See under "LEADWORK (TOWER PARAPET WALLS)".	
25.21	**Replacement**	Provisionally allow an extra/over price for replacing the whole of the stringcourse in limestone in a profile to match the existing (final profile to be agreed with the Church Architect before the works are put in hand). For pricing purposes, assume limestone to be Totternhoe Stone.	
25.22		Provisionally allow an extra/over price for replacement using pale cream/white Chicksgrove/Chilmark stone.	
25.23	**New Opening Through Parapet Wall**		
25.24	**Form new opening in Tower North Parapet for new lead chute overflow.**		
25.25	Form new opening in Tower North Parapet for new lead chute overflow (to discharge into the relocated rainwater downpipe from the Tower (West Elev).		
25.26	**Unforeseen Repairs**		
25.27	Allow a provisional sum of £2,500 for unforeseen masonry repairs.		Prov. Sum £2,500

26.0 LEADWORK (TOWER PARAPET WALLS)

26.1 **Parapet Stringcourse**

26.2 **Allow for providing new lead drip/flashing to parapet stringcourse.**

26.3 **Lead drip/flashing** **Allow for providing new lead drip/flashing to stringcourse See under "MASONRY REPAIRS (TOWER PARAPET WALLS)".** For pricing, assume Code 6 sand cast lead. Allow for providing chase to brickwork, and wedging lead securely in position.

26.4 **Generally** Lead sheet to BS EN 12588 to be fitted in accordance with BS 6915 and the recommendations of the Lead Sheet Training Academy (formerly the Lead Sheet Association) as defined and illustrated in the "Rolled Lead Sheet- The Complete Manual"). Work to be undertaken by a specialist leadworker with experience of work on historic church buildings.

26.5 **Lead Chute Overflow**

26.6 See "Lead Chute Overflow" in "LEADWORK (TOWER LOWER/MID-STAGE)"

27.0 OTHER (TOWER PARAPET WALLS)

27.1 **Lightning Protection System**

27.2 See "Lightning Protection System" in "**MISCELLANEOUS**".

27.3 **Wind Vane**

27.4 **Allow for easing and overhauling and redecorating wind vane.**

27.5 Allow for easing and overhauling wind vane, and re-gilding by specialist in system to match the existing.

27.6 **Redundant Iron Bracket Adjacent to Earlier Wind Vane**

27.7 **Allow for applying Renaissance wax to exposed surfaces of the iron cross.**

27.8 **Iron Cross to West Parapet (Front Face)**

27.9 **Allow for applying Renaissance wax to exposed surfaces of the iron cross.**

TOWER (LOWER/MID-STAGE) - ALL FOUR ELEVATIONS

Section Contents

TOWER (LOWER/MID-STAGE) - ALL FOUR ELEVATIONS

28.0 MASONRY REPAIRS (TOWER LOWER/MID-STAGE)

28.1 **Re-Pointing Walls**

28.2 **Allow for re-pointing the walls.**

28.3 Allow for re-pointing all failing, open, or hard, cementitious pointing. For pricing purposes, assume all (100%) pointing is to be raked out, the joints prepared, and re-pointed. Lime mortar to be Lime Mortar #1 (sand/aggregates).

28.4 **Lime Conservation and Repairs - Totternhoe Stone**

28.5 **Allow for repairs to existing pieces of Totternhoe Stone.**

28.6 Allow for standard lime conservation and repair techniques, including for removal of any hard, cementitious pointing/render, etc. Carefully de-scale, consolidate (infill any voids, with lime putty and stone dust mortar), buttress exposed edges with lime mortar, and apply 40 coats of limewater treatment. To badly weathered stone, allow for selected remaking profile using specialist conservation mortar (a geopolymer - appropriate here because it is breathable to varying degrees depending on design/mix adopted, retains flexibility but is still hard-wearing, and can be colour-matched to the existing limestone). Allow for a fine lime-based shelter coat (colour-matched to the existing Totternhoe stonework). Shelter coats must be designed by the conservator. A sample of the shelter coat is to be provided for approval by the Architect before putting the work in hand. For pricing purposes, assume all of the Totternhoe stonework is to be shelter-coated. However, the full extent of the works is to be agreed with the Architect. A note on the works carried out is to be included in a single project 'Conservator's Report'
This work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.

28.7 **Provisionally allow for replacement of Totternhoe stone quoins.**

28.8 Whilst it is thought that most of the existing Totternhoe stone quoins can be conserved and repaired and therefore retained, provisionally allow for some replacement. For pricing purposes, assume that 50% of the total number of quoins to the Tower mid-stage are to be replaced. Agree full extent of replacement with the Church Architect on-site.

28.9 **Localised Rebuilding**

28.10 **Allow for localised rebuilding. Final extent of work to be agreed with the Church Architect on-site.**

28.11 Bricks — Provisionally allow for cutting-out and replacing 50no. of the existing soft red clay bricks, bedded in Lime Mortar #1 (sand/aggregates).

28.12	Totternhoe Stone	Provisionally allow for replacing 25no. of the existing Totternhoe Stone blocks, finished with a hand drag to remove any saw marks, bedded in Lime mortar #1 (sand/aggregates). For pricing purposes, assume replacement blocks are approximately 225mm long by 150m high by 150mm deep.	
28.13	Ironstone	Provisionally allow for replacing 25no. of the existing ironstone blocks, bedded in Lime mortar #1 (sand/aggregates). For pricing purposes, assume replacement blocks are approximately 225mm long by 150m high by 150mm deep.	
28.14		Provisionally allow for replacement of selected Clophill-type ironstone quoins. Whilst it is thought that most of the existing Clophill-type ironstone quoins can be retained (with repairs as needed), provisionally allow for some replacement. For pricing purposes, assume that 25% of the total number of quoins to the Tower lower/mid-stage are to be replaced. Agree full extent of replacement with the Church Architect on-site.	
28.15	Fieldstones	Provisionally allow for replacing 100no. fieldstones, etc, bedded in Lime mortar #1 (sand/aggregates). Size and colour of replacements are to match those of the existing elevation.	
28.16	**Low Level Buttresses/Masonry Shoulders (North East & South East) – Repairs to Offsets**		
28.17	**Allow for repairs to the offsets to the 2no. Buttresses/Masonry Shoulders.**		
28.18	Whilst it may be possible to repair some of the original offset stones, for pricing purposes, assume all offsets (all original, full format, stones, which appear to be in Totternhoe Stone) are to be replaced in a Totternhoe Stone. Stone offsets to be finished with a hand drag to remove any saw marks, and bedded in Lime mortar #1 (sand/aggregates). Agree full extent of replacement with the Church Architect on-site.		
28.19	Provisionally allow an extra/over price for replacement of offsets using pale cream/white Chicksgrove/Chilmark stone.		
28.20	**Unforeseen Repairs**		
28.21	Allow a provisional sum of £2,500 for unforeseen masonry repairs.		Prov. Sum £2,500
29.0	LEADWORK (TOWER LOWER/MID-STAGE)		
29.1	**New Lead Chute Overflow**		
29.2	**Allow for providing new lead chute overflow.** Lead chute overflow to project approx.. 600mm beyond the face of the Tower (North Elevation). Allow for lead downspigot to drop down into the top of the rainwater downpipe.		
29.3	**New Rainwater Catcher/Diverter**		

29.4 See "New Leadwork to Parapet Gutters, Sumps, and Outlets" under "NORTH TRANSEPT ROOF" in "**ROOFS**"

29.5 **Relocated Rainwater Downpipe (From Tower West Elevation)**

29.6 **Allow a provisional sum of £500 for lead repairs to re-used rainwater downpipe.** Prov. Sum £500

29.7 **Provisionally allow for a new (replacement) lead downpipe.**

29.8 Provisionally allow an extra/over price for full replacement of the existing rainwater downpipe in matching leadwork.

30.0 WINDOWS (TOWER LOWER/MID-STAGE)

30.1 **Belfry Lights**

30.2 **Allow for conservation and repairs to the Belfry lights.**

30.3 The existing Belfry lights are believed to have been partially repaired by applying a hard cement render over earlier, weathered stonework (possibly Totternhoe Stone). Sections of this render has been failing for some time.

30.4 **Render Repairs and Lime Conservation and Repairs to Exposed Stonework**

Allow for render repairs to the existing.
To the stonework, allow for standard lime conservation and repair techniques, including for removal of any hard, cementitious pointing/render, etc. Carefully de-scale, consolidate (infill any voids, with lime putty and stone dust mortar), buttress exposed edges with lime mortar, and apply 40 coats of limewater treatment. To badly weathered stone, allow for selected remaking profile of stone using specialist conservation mortar (a geopolymer - appropriate here because it is breathable to varying degrees depending on design/mix adopted, retains flexibility but is still hard-wearing, and can be colour-matched to the existing limestone). Allow for a fine lime-based shelter coat (colour-matched to the existing Totternhoe stonework). Shelter coats must be designed by the conservator. A sample of the shelter coat is to be provided for approval by the Architect before putting the work in hand. For pricing purposes, assume all of the Totternhoe stonework is to be shelter-coated. However, the full extent of the works is to be agreed with the Architect. A note on the works carried out is to be included in a single project 'Conservator's Report'
This work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.

30.5 **Stone Replacement (of complete window)**

Provisionally allow an extra/over price for replacing the whole of the stonework to the Belfry Lights in limestone to the existing design and in a profile to match the existing For pricing

		purposes, assume limestone to be a Totternhoe Stone. Final scope of work to be agreed on-site with the Church Architect on-site before the works are put in hand.
30.6		Provisionally allow an extra/over price for replacement using pale cream/white Chicksgrove/Chilmark stone.
30.7	**Timber Louvres**	Inspection - Allow for inspecting and reporting on the condition of the timber lourves and the lead flashing/weathering underneath.
30.8		Repairs - Provisionally allow for repairs to the existing timber louvres. Allow for re-fixing loose louvre blades, replacing damaged or missing louvre blades. For pricing purposes, assume 5no. louvre blades are to be replaced to each of the Belfry lights), and redecoration of timberwork (provisionally allow for liming of timber) For liming, see "Louvres to Belfry Lights – Liming" under "DECORATIONS (TOWER LOWER/MID-STAGE)"
30.9		Replacement - Allow an extra over price for complete replacement of the louvres to one half of one of the Belfry Lights
30.10	**Lead Weathering to Sill**	Provisionally allow for providing new lead weathering detail to window sill. Final decision on this detail is to be confirmed on-site by the Church Architect.
30.11	**Sound Deadening Chamber Lights**	
30.12	**Allow for conservation and repairs to the South Deadening Chamber lights.**	
30.13	The existing Sound Deadening Chamber lights is mixed, with layers of past repairs. In places the condition is very poor in places. The lights are constructed from or have been repairs with a mix of ironstone, Totternhoe Stone, and more recently with what appears to be a Bath limestone as well as cement render and pointing.	
30.14	**Render Repairs and Lime Conservation and Repairs to Exposed Stonework**	Allow for standard lime conservation and repair techniques, including for removal of any hard, cementitious pointing/render, etc. Carefully de-scale, consolidate (infill any voids, with lime putty and stone dust mortar), buttress exposed edges with lime mortar, and apply 40 coats of limewater treatment. To badly weathered stone, allow for selected remaking profile of stone using specialist conservation mortar (a geopolymer - appropriate here because it is breathable to varying degrees depending on design/mix adopted, retains flexibility but is still hard-wearing, and can be colour-matched to the existing limestone). Allow for a fine lime-based shelter coat (colour-matched to the existing Totternhoe stonework). Shelter coats must be designed by the conservator. A sample of the shelter coat is to be provided for approval by the Architect before putting the work in hand. For pricing purposes, assume all of the Totternhoe stonework is to be shelter-coated. However, the full extent of the works is to be agreed with the Architect. A

		note on the works carried out is to be included in a single project 'Conservator's Report'	
30.15		**This work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.**	
30.16	**Selective Stone Replacement (of Totternhoe stone**	Provisionally allow an extra/over price for replacing the whole of the Totternhoe stonework to the lights to the existing design and in a profile to match the existing For pricing purposes, assume limestone to be Totternhoe stone. Final scope of work to be agreed on-site with the Church Architect on-site before the works are put in hand.	
30.17	**Lead Weathering to Sill**	Provisionally allow for providing new lead weathering detail to window sill. Final decision on this detail is to be confirmed on-site by the Church Architect.	
30.18	**Unforeseen Repairs**		
30.19	Allow a provisional sum of £2,500 for unforeseen repairs to the Belfry and Sound Deadening Chamber Lights.		Prov. Sum £2,500
31.0	DECORATIONS (TOWER LOWER/MID-STAGE)		
31.1	**Louvres to Belfry Lights - Liming**		
31.2	**Allow for liming the timberwork to the Belfry Lights.**		
31.3	Allow for applying a traditional limewash (no pigment, no binder other than lime putty) to the timberwork. Leave in place for 24 hours, then carefully remove with a damp cloth.		
32.0	RAINWATER GOODS (TOWER PARAPET WALLS)		
32.1	**Relocate Existing Tower Downpipe Position (Tower West Elev, North Side)**		
32.2	**To improve the efficiency of the rainwater goods system and the robustness of the design, allow for relocating the existing lead rainwater downpipe to the Tower (North Elevation), west end of the elevation.**		
32.3	The new arrangement will allow the awkward existing arrangement to be omitted (currently, the downpipe has a bend at the foot of the downpipe, which then discharges into a lead tank which itself discharges to the North Transept roof. The bend in the downpipe has no means for clearing if it becomes blocked. Accommodation of the pipe has led to a weak weathering detail above the Nave roof which is currently failing. The lead tank, which sits on a raised masonry shoulder above the parapet wall is difficult to reach to clear of leaf litter, etc.		
32.4	**Relocate RWP**	Allow for inspecting and reporting on condition of the existing lead rainwater goods to the west elevation. Where serviceable, allow for re-use on the north elevation. However, for pricing	

		purposes, allow for replacing the existing lead rainwater downpipe in lead should this be required. All detailing, including fixings, etc, is to match the existing downpipe to the east elevation. Existing hopper detail (which is considered a blockage risk) is to be by-passed with the downspigot and the top of the hopper given a discreet lead cap to prevent collecting leaf litter or nesting material.	
32.4	**Repairs**	See repairs noted in "Relocated Rainwater Downpipe (From Tower West Elevation)" under "LEADWORK (TOWER MID-STAGE)"	
32.5	**Chute Overflow**	See "New Lead Chute Overflow" under "LEADWORK"	
32.6	**Masonry Shoulder (Nave North Clerestory, North Elevation, East End)**		
32.7	See "Nave North Clerestory" under "MASONRY REPAIRS (NAVE NORTH CLERESTROY)".		
33.0	OTHER (TOWER PARAPET WALLS)		
33.1	**Lightning Protection System**		
33.2	See "Lightning Protection System" in "**GENERAL ITEMS**".		

SOUTH TRANSEPT (PARAPET WALLS)

Section Contents

SOUTH TRANSEPT (PARAPET WALLS)

34.0 MASONRY REPAIRS (SOUTH TRANSEPT PARAPET WALLS)

34.1 **Structural Repairs to the Masonry Above the South Window, etc.**

34.2 **Allow for structural repairs to the masonry above the South Window, etc**.

34.3 Work specified by the Structural Engineer includes supply and installation of new beam, padstones, etc. See Appendices for Structural Engineer's report/specification dated 6th April 2022 for further details. Allow for discussion on-site with the Structural Engineer and Church Architect.

34.4 Allow for all builder's work in connection with the above works, including all temporary support, removal of existing structural beam (and iron bar beneath the stone window head), and making good masonry upon completion, including plaster/render and stone repairs.

34.5 **Copings**

34.6 **Allow for repairs to the parapet wall copings.**

34.7 Allow for removing the existing, failing, rendered or cast concrete copings to merlons and the tiled or renders or cast copings to the embrasures.

34.8 **Merlons** (Solid part of the crenelated parapet) — **Provisionally allow for replacing the copings to the merlons.** Coping/parapet wall detail to match the existing. Allow for replacing in limestone in profile to match the existing. For pricing purposes, assume limestone to be pale cream/white Chicksgrove/Chilmark stone, finished with a hand drag to remove any saw marks. Allow for stone dowels or stainless steel pins to locate coping into walltop. Allow for bedding in lime mortar - Lime mortar #1 (sand/aggregates).

34.9 **Embrasures** (Openings between the merlons) — **Provisionally allow for replacing the tiled, or failing, rendered or cast concrete copings to the embrasures.** Coping/parapet wall detail (as seen from the outside) is to match the existing (note: the tile detail is not to be replicated). Other details to be as noted above.

34.10 **Re-Render Parapet Walls**

34.11 **Allow for re-rendering the parapet walls (inside & out) incl. associated repairs.**

34.12 It is anticipated that significant rebuilding of the parapet wall may be required (due to presence of hard cement render and long-term rainwater ingress).

34.13 **Remove render** — **Allow for removing the existing hard, cementitious render to inside and outside faces.**

34.14 **Masonry repairs** — **Allow for masonry repairs to the wall core.** Where the existing parapet walls are found to be in reasonable condition, they are

to be retained, and re-rendered (see note below). However, for pricing purposes, assume the walls are in a poor condition and allow for complete re-building, down to parapet stringcourse level.

34.15 Wall Materials - Allow for reuse of the existing (which may include a mix of some or all of: ironstone rubble, cobbles and fieldstones, clunch face-dressed rubble, red clay bricks, red clay tiles, etc), but provisionally allow for 25% replacement of masonry in matching material (local ironstone rubble, with some cobbles and fieldstone, clunch dressed rubble. Contractor to confirm in-site. Profile and construction of the rebuilt wall is to match the existing.

34.16 Lime mortar - Lime mortar #1 (sand/aggregates).

34.17 Re-rendering **Allow re-rendering the front and rear faces of the parapet walls.** For lime render mix, see under "**GENERAL ITEMS**".

34.18 **Provisionally allow for modelling the render to give the impression of stone coursing to the render.** Allow for providing a sample for approval by the Architect.

34.19 Parapet Stringcourse

34.20 Allow for repairs to the parapet stringcourse.

34.21 The existing parapet stringcourse is believed to be constructed of rendered masonry, which is now failing. There are two options for repair.

34.22 Inspection Inspection – Allow for checking over the stringcourse to all elevations of the South Transept and reporting condition to the Architect. Allow for removing loose material as required.

34.23 Repairs Lime render repairs – Allow for lime render repairs. For mix, see 'Lime Render' under "**GENERAL ITEMS**". Profile, surface texture, and colour of the finished render is to match the existing . Allow for providing a series of samples for approval by the Architect on-site. Provisionally allow for stainless steel armature for new work.

34.24 Lead drip – Allow for providing new lead drip to stringcourse. See Parapet Stringcourse" under "LEADWORK (TOWER PARAPET WALLS" below.".

34.25 Replacement Provisionally allow an extra/over price for replacing the whole of the stringcourse in limestone in a profile to match the existing (final profile to be agreed with the Church Architect before the works are put in hand). For pricing purposes, assume limestone to be a Totternhoe Stone.

34.26 Provisionally allow an extra/over price for replacement using pale cream/white Chicksgrove/Chilmark stone.

34.27	**Unforeseen Repairs**		
34.28	Allow a provisional sum of £2,500 for unforeseen masonry repairs.		Prov. Sum £2,500
35.0	LEADWORK (SOUTH TRANSEPT PARAPET WALLS)		
35.1	**Parapet Stringcourse**		
35.2	**Allow for providing new lead drip/flashing to parapet stringcourse.**		
35.3	**Lead drip/flashing**	**Allow for providing new lead drip/flashing to stringcourse**	
35.4		For pricing, assume Code 6 sand cast lead. Allow for providing chase to brickwork, and wedging lead securely in position.	
35.5	**Generally**	Lead sheet to BS EN 12588 to be fitted in accordance with BS 6915 and the recommendations of the Lead Sheet Training Academy (formerly the Lead Sheet Association) as defined and illustrated in the "Rolled Lead Sheet- The Complete Manual"). Work to be undertaken by a specialist leadworker with experience of work on historic church buildings.	
35.6	**Lead Chute Overflow**		
35.7	See "Lead Chute Overflow" under "SOUTH TRANSEPT ROOF" in "**ROOFS**".		
36.0	OTHER (SOUTH TRANSEPT PARAPET WALLS)		
36.1	**Lightning Protection System**		
36.2	See "Lightning Protection System" in "**MISCELLANEOUS**".		

SOUTH TRANSEPT (MAIN ELEVATIONS)

Section Contents

SOUTH TRANSEPT (MAIN ELEVATIONS)

38.0 MASONRY REPAIRS (SOUTH TRANSEPT MAIN ELEVATIONS)

38.1 **Re-Pointing Walls**

38.2 **Allow for re-pointing the walls.**

38.3 Allow for re-pointing all failing, open, or hard, cementitious pointing. For pricing purposes, assume all (100%) pointing is to be raked out, the joints prepared, and re-pointed. Lime mortar to be Lime Mortar #1 (sand/aggregates).

38.4 **Lime Cons and Repairs - Totternhoe Stone Incl. Scratch Dial, Graffiti, etc.**

38.5 **Allow for repairs to existing pieces of Totternhoe Stone, Scratch Dial, Graffiti, etc.**

38.6 Allow for standard lime conservation and repair techniques, including for removal of any hard, cementitious pointing/render, etc. Carefully de-scale, consolidate (infill any voids, with lime putty and stone dust mortar), buttress exposed edges wit lime mortar, and apply 40 coats of limewater treatment. To badly weathered stones, allow for remaking profile of stone to exposed outside corner using specialist conservation mortar (a geopolymer - appropriate here because it is breathable to varying degrees depending on design/mix adopted, retains flexibility but is still hard-wearing, and can be colour-matched to the existing limestone). Allow for a fine lime-based shelter coat (colour-matched to the existing Totternhoe stonework). Shelter coats must be designed by the conservator. A sample of the shelter coat is to be provided for approval by the Architect before putting the work in hand. For pricing purposes, assume all of the Totternhoe stonework is to be shelter-coated. However, the full extent of the works is to be agreed with the Architect. A note on the works carried out is to be included in a single project 'Conservator's Report'

38.7 **This work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.**

38.8 **Provisionally allow for replacement of Totternhoe stone quoins.**

38.9 Whilst it is thought that most of the existing Totternhoe stone quoins can be conserved and repairs and therefore retained, provisionally allow for some replacement. For pricing purposes, assume that 50% of the total number of quoins to the South Transept are to be replaced. Agree full extent of replacement with the Church Architect on-site.

38.10 **Localised Rebuilding**

38.11 **Allow for localised rebuilding. Final extent of work to be agreed with the Church Architect on-site.**

38.12 Totternhoe Stone — Provisionally allow for replacing 5no. of the existing Totternhoe Stone blocks, finished with a hand drag to remove any saw marks, bedded in Lime mortar #1 (sand/aggregates). For pricing purposes, assume replacement blocks are approximately 225mm long by 150m high by 150mm deep.

38.13 Ironstone — Provisionally allow for replacing 5no. of the existing ironstone blocks, bedded in Lime mortar #1 (sand/aggregates). For pricing purposes, assume replacement blocks are approximately 225mm long by 150m high by 150mm deep.

38.14 Provisionally allow for replacement of selected Clophill-type ironstone quoins. Whilst it is thought that most of the existing Clophill-type ironstone quoins can be retained (with repairs as needed), provisionally allow for some replacement. For pricing purposes, assume that 25% of the total number of quoins to the Tower lower/mid-stage are to be replaced. Agree full extent of replacement with the Church Architect on-site.

38.15 Fieldstones — Provisionally allow for replacing 50no. fieldstones, etc, bedded in Lime mortar #1 (sand/aggregates). Size and colour of replacements are to match those of the existing elevation.

38.16 **Unforeseen Repairs**

38.17 Allow a provisional sum of £2,500 for unforeseen masonry repairs. — Prov. Sum £2,500

39.0 WINDOWS (SOUTH TRANSEPT MAIN ELEVATIONS)

39.1 **South Window - Conservation & Repair Work**

39.2 **Allow for lime conservation and repairs to window masonry.**

39.3 Allow for standard lime conservation and repair techniques, including for removal of any hard, cementitious pointing/render, etc. Carefully de-scale, consolidate (infill any voids, with lime putty and stone dust mortar), buttress exposed edges wit lime mortar, and apply 40 coats of limewater treatment. To badly weathered stones, allow for remaking profile of stone to exposed outside corner using specialist conservation mortar (a geopolymer - appropriate here because it is breathable to varying degrees depending on design/mix adopted, retains flexibility but is still hard-wearing, and can be colour-matched to the existing limestone). Allow for a fine lime-based shelter coat (colour-matched to the existing Totternhoe stonework). Shelter coats must be designed by the conservator. A sample of the shelter coat is to be provided for approval by the Architect before putting

the work in hand. For pricing purposes, assume all of the Totternhoe stonework is to be shelter-coated. However, the full extent of the works is to be agreed with the Architect. A note on the works carried out is to be included in a single project 'Conservator's Report'
This work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.

39.4 **South Window - Stone Replacement**

39.5 Provisionally allow for selected stone replacement. Provisionally allow for replacing 50% of the jamb stones to the west side of the window. For pricing purposes, assume replacement stone is Totternhoe stone. However, the full extent of the works is to be agreed with the Architect.

39.6 **South Window – Provision of Window Opening Vent**

39.7 See under WINDOWS / OPENINGS (SOUTH TRANSEPT) in "INTERIOR ACCOMMODATION".

39.8 **South Window – Glazing, etc, Repairs**

39.9 See under WINDOWS / OPENINGS (SOUTH TRANSEPT) in "INTERIOR ACCOMMODATION".

39.10 **East Lights (Tower Stair) – Conservation and Repair**

39.11 **Allow for lime conservation and repairs to window masonry (as for South Window).**

39.12 A note on the works carried out is to be included in a single project 'Conservator's Report'.
This work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.

39.13 **Unforeseen Repairs**

39.14 Allow a provisional sum of £2,500 for unforeseen masonry repairs. Prov. Sum £2,500

40.0 RAINWATER GOODS (SOUTH TRANSEPT MAIN ELEVATIONS)

40.1 **Lead Chute Overflows and Downspigots (to East & West Elevations) - Repairs**

40.2 **Allow for repairs to the exiting lead chute overflows.**

40.3 Where the existing is found to be in a reasonable condition, allow for retaining (and any minor repairs if required). However, for pricing purposes, provisionally allow for providing new lead chute overflow. Lead chute overflow to project a minimum of 450mm from the face of the elevation. To the west elevation, allow for 30 degree horizontal divert/angle in chute away from the South Aisle Roof. Allow for lead downspigot to drop down into the top of the rainwater downpipe.

40.4 **Rainwater Downpipes (to East and West Elevations) - Replacement**

40.5 **Allow for replacing the existing uPVC rainwater goods with a traditional pattern cast iron system.**

40.6 **Rainwater Downpipe (to East Elevation) – Repositioning of Downpipe**

40.7 **Allow for repositioning eastern downpipe, to avoid awkward juxtaposition with Tower Stair East Light.**

40.8 For new position, see drawings. Allow for adjustments to gully and below-ground pipework, new opening in the parapet wall (and making good the existing).

41.0 DECORATIONS (SOUTH TRANSEPT MAIN ELEVATIONS)

41.1 **Air Bricks**

41.2 **Allow for decorating/re-decorating in Dulux Metalshield system.**

41.3 Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: "00 NN 25/000" Lead Grey.

41.4 **Rainwater Goods**

41.5 **Allow for decorating/re-decorating in Dulux Metalshield system.**

41.6 Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: "00 NN 25/000" Lead Grey.

42.0 OTHER (SOUTH TRANSEPT MAIN ELEVATIONS)

42.1 **Lightning Protection System**

42.2 See "Lightning Protection System" in "**MISCELLANEOUS**".

NORTH TRANSEPT (PARAPET WALLS)

Section Contents:

NORTH TRANSEPT (PARAPET WALLS)

43.0 MASONRY REPAIRS (NORTH TRANSEPT PARAPET WALLS)

43.1 **Structural Repairs to the Masonry Above the North Window, etc.**

43.2 Note: Whilst the condition of the masonry here appears to be better than that evident to the South Transept, the Contractor should allow for inspection by the Structural Engineer, and possible structural repairs (see below).

43.3 **Provisionally allow for structural repairs to the masonry above the North Window, etc**.

43.4 Provisionally allow for the same work as detailed for the South Transept South Window. Allow for inspection by the Structural Engineer and Church Architect and confirmation of how to proceed.

43.5 Allow for all builder's work in connection with the above works, including all temporary support, and making good masonry upon completion, including plaster/render and stone repairs.

43.6 **Copings**

43.7 **Allow for repairs to the parapet wall copings.**

43.8 Allow for removing the existing, failing, rendered or cast concrete copings to merlons and the tiled or renders or cast copings to the embrasures.

43.9 **Merlons** (Solid part of the crenelated parapet)

Provisionally allow for replacing the copings to the merlons. Coping/parapet wall detail to match the existing. Allow for replacing in limestone in profile to match the existing. For pricing purposes, assume limestone to be pale cream/white Chicksgrove/Chilmark stone, finished with a hand drag to remove any saw marks. Allow for stone dowels or stainless steel pins to locate coping into walltop. Allow for bedding in lime mortar - Lime mortar #1 (sand/aggregates).

43.10 **Embrasures** (Openings between the merlons)

Provisionally allow for replacing the tiled, or failing, rendered or cast concrete copings to the embrasures. Coping/parapet wall detail (as seen from the outside) is to match the existing (note: the tile detail is not to be replicated). Other details to be as noted above.

43.11 **Re-Render Parapet Walls**

43.12 **Allow for re-rendering the parapet walls (inside & out) incl. associated repairs.**

43.13 It is anticipated that significant rebuilding of the parapet wall may be required (due to presence of hard cement render and long-term rainwater ingress).

43.14 **Remove render**

Allow for removing the existing hard, cementitious render to inside and outside faces.

43.15	**Masonry repairs**	**Allow for masonry repairs to the wall core.** Where the existing parapet walls are found to be in reasonable condition, they are to be retained, and re-rendered (see note below). However, for pricing purposes, assume the walls are in a poor condition and allow for complete re-building, down to parapet stringcourse level.
43.16		Wall Materials - Allow for reuse of the existing (which may include a mix of some or all of: ironstone rubble, cobbles and fieldstones, clunch face-dressed rubble, red clay bricks, red clay tiles, etc), but provisionally allow for 25% replacement of masonry in matching material (local ironstone rubble, with some cobbles and fieldstone, clunch dressed rubble. Contractor to confirm in-site. Profile and construction of the rebuilt wall is to match the existing.
43.17		Lime mortar - Lime mortar #1 (sand/aggregates).
43.18	**Re-rendering**	**Allow re-rendering the front and rear faces of the parapet walls.** For lime render mix, see under "**GENERAL ITEMS**".
43.19		**Provisionally allow for modelling the render to give the impression of stone coursing to the render.** Allow for providing a sample for approval by the Architect.
43.20	**Parapet Stringcourse**	
43.21	**Allow for repairs to the parapet stringcourse.**	
43.22	The existing parapet stringcourse is believed to be constructed of rendered masonry, which is now failing. There are two options for repair.	
43.23	**Inspection**	Inspection – Allow for checking over the stringcourse to all elevations of the South Transept and reporting condition to the Architect. Allow for removing loose material as required.
43.24	**Repairs**	Lime render repairs – Allow for lime render repairs. For mix, see 'Lime Render' under "**GENERAL ITEMS**". Profile, surface texture, and colour of the finished render is to match the existing . Allow for providing a series of samples for approval by the Architect on-site. Provisionally allow for stainless steel armature for new work.
43.25		Lead drip – Allow for providing new lead drip to stringcourse. See Parapet Stringcourse" under "LEADWORK (TOWER PARAPET WALLS" below.".
43.26	**Replacement**	Provisionally allow an extra/over price for replacing the whole of the stringcourse in limestone in a profile to match the existing (final profile to be agreed with the Church Architect before the works are put in hand). For pricing purposes, assume limestone to be a Totternhoe Stone

		Provisionally allow an extra/over price for replacement using pale cream/white Chicksgrove/Chilmark stone.	
43.27	**Unforeseen Repairs**		
43.28	Allow a provisional sum of £2,500 for unforeseen masonry repairs.		Prov. Sum £2,500
44.0	LEADWORK (NORTH TRANSEPT PARAPET WALLS)		
44.1	**Parapet Stringcourse**		
44.2	**Allow for providing new lead drip/flashing to parapet stringcourse.**		
44.3	**Lead drip/flashing**	**Allow for providing new lead drip/flashing to stringcourse**	
44.4		For pricing, assume Code 6 sand cast lead. Allow for providing chase to brickwork, and wedging lead securely in position.	
44.5	**Generally**	Lead sheet to BS EN 12588 to be fitted in accordance with BS 6915 and the recommendations of the Lead Sheet Training Academy (formerly the Lead Sheet Association) as defined and illustrated in the "Rolled Lead Sheet- The Complete Manual"). Work to be undertaken by a specialist leadworker with experience of work on historic church buildings.	
44.6	**Lead Chute Overflow**		
44.7	See "Lead Chute Overflow" under "SOUTH TRANSEPT ROOF" in "ROOFS".		

NORTH TRANSEPT (MAIN ELEVATIONS)

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NORTH TRANSEPT (MAIN ELEVATIONS)

45.0 MASONRY REPAIRS (NORTH TRANSEPT MAIN ELEVATIONS)

45.1 **Re-Pointing Walls**

45.2 **Allow for re-pointing the walls.**

45.3 Allow for re-pointing all failing, open, or hard, cementitious pointing. For pricing purposes, assume all (100%) pointing is to be raked out, the joints prepared, and re-pointed. Lime mortar to be Lime Mortar #1 (sand/aggregates).

45.4 **Lime Conservation and Repairs - Totternhoe Stone**

45.5 **Allow for conservation and repairs to existing Totternhoe Stone quoins, etc.**

45.6 Allow for standard lime conservation and repair techniques, including for removal of any hard, cementitious pointing/render, etc. Carefully de-scale, consolidate (infill any voids, with lime putty and stone dust mortar), buttress exposed edges wit lime mortar, and apply 40 coats of limewater treatment. To badly weathered stones, allow for remaking profile of stone to exposed outside corner using specialist conservation mortar (a geopolymer - appropriate here because it is breathable to varying degrees depending on design/mix adopted, retains flexibility but is still hard-wearing, and can be colour-matched to the existing limestone). Allow for a fine lime-based shelter coat (colour-matched to the existing Totternhoe stonework). Shelter coats must be designed by the conservator. A sample of the shelter coat is to be provided for approval by the Architect before putting the work in hand. For pricing purposes, assume all of the Totternhoe stonework is to be shelter-coated. However, the full extent of the works is to be agreed with the Architect. A note on the works carried out is to be included in a single project 'Conservator's Report' **This work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.**

45.7 **Provisionally allow for replacement of Totternhoe stone quoins.**

45.8 Whilst it is thought that most of the existing Totternhoe stone quoins can be conserved and repairs and therefore retained, provisionally allow for some replacement. For pricing purposes, assume that 50% of the total number of quoins to the North Transept are to be replaced. Agree full extent of replacement with the Church Architect on-site.

45.9 **Localised Rebuilding**

45.10 **Allow for localised rebuilding. Final extent of work to be agreed with the Church Architect on-site.**

45.11 Totternhoe Stone — Provisionally allow for replacing 5no. of the existing Totternhoe Stone blocks, finished with a hand drag to remove any saw marks, bedded in Lime mortar #1 (sand/aggregates). For pricing purposes, assume replacement blocks are approximately 225mm long by 150m high by 150mm deep.

45.12	Ironstone	Provisionally allow for replacing 5no. of the existing ironstone blocks, bedded in Lime mortar #1 (sand/aggregates). For pricing purposes, assume replacement blocks are approximately 225mm long by 150m high by 150mm deep.	
45.13		Provisionally allow for replacement of selected Clophill-type ironstone quoins. Whilst it is thought that most of the existing Clophill-type ironstone quoins can be retained (with repairs as needed), provisionally allow for some replacement. For pricing purposes, assume that 25% of the total number of quoins to the Tower lower/mid-stage are to be replaced. Agree full extent of replacement with the Church Architect on-site.	
45.14	Fieldstones	Provisionally allow for replacing 50no. fieldstones, etc, bedded in Lime mortar #1 (sand/aggregates). Size and colour of replacements are to match those of the existing elevation.	
45.15	**North Buttresses – Repairs to Offsets**		
45.16	**Allow for repairs to the offsets to the 2no. North Buttresses.**		
45.17	Whilst it may be possible to repair some of the original stones, for pricing purposes, assume all offsets (all original, full format, stones, which appear to be in Totternhoe Stone) are to be replaced in a Totternhoe Stone. Stone offsets to be finished with a hand drag to remove any saw marks, and bedded in Lime mortar #1 (sand/aggregates). Agree full extent of replacement with the Church Architect on-site.		
45.18	Provisionally allow an extra/over price for replacement of offsets using pale cream/white Chicksgrove/Chilmark stone.		
45.19	**Unforeseen Repairs**		
45.20	Allow a provisional sum of £2,500 for unforeseen masonry repairs.		Prov. Sum £2,500
46.0	WINDOWS (NORTH TRANSEPT MAIN ELEVATIONS)		
46.1	**North Window - Conservation & Repair Work**		
46.2	**Allow for lime conservation and repairs to window masonry.**		
46.3	Allow for standard lime conservation and repair techniques, including for removal of any hard, cementitious pointing/render, etc. Carefully de-scale, consolidate (infill any voids, with lime putty and stone dust mortar), buttress exposed edges with lime mortar, and apply 40 coats of limewater treatment. To badly weathered stones, allow for remaking profile of stone to exposed outside corner using specialist conservation mortar (a geopolymer - appropriate here because it is breathable to varying degrees depending on design/mix adopted, retains flexibility but is still hard-wearing, and can be colour-matched to the existing limestone). Allow for a fine lime-based shelter coat (colour-matched to the existing Totternhoe stonework). Shelter coats must be designed by the conservator. A		

sample of the shelter coat is to be provided for approval by the Architect before putting the work in hand. For pricing purposes, assume all of the Totternhoe stonework is to be shelter-coated. However, the full extent of the works is to be agreed with the Architect. A note on the works carried out is to be included in a single project 'Conservator's Report' **This work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.**

46.4 **North Window - Stone Replacement**

46.5 Provisionally allow for selected stone replacement. Provisionally allow for replacing 50% of the jamb stones to the west side of the window. For pricing purposes, assume replacement stone is Totternhoe stone. However, the full extent of the works is to be agreed with the Architect.

46.6 **North Window – Glazing, etc, Repairs**

46.7 See under WINDOWS/OPENINGS (NORTH TRANSEPT) in "**INTERIOR ACCOMM**".

46.8 **Unforeseen Repairs**

46.9 Allow a provisional sum of £1,000 for unforeseen masonry repairs. Prov. Sum £1,000

47.0 RAINWATER GOODS (NORTH TRANSEPT MAIN ELEVATIONS)

47.1 **Lead Chute Overflows and Downspigots (to East & West Elevations) - Repairs**

47.2 **Allow for repairs to the exiting lead chute overflows.**

47.3 Where the existing is found to be in a reasonable condition, allow for retaining existing lead chute overflows (and any minor repairs if required). However, for pricing purposes, provisionally allow for providing new lead chute overflow. Lead chute overflow to project a minimum of 450mm from the face of the elevation. To the west elevation, allow for 30 degree horizontal divert/angle in chute away from the South Aisle Roof. Allow for lead downspigot to drop down into the top of the rainwater downpipe.

47.4 **Rainwater Downpipes (to East and West Elevations) - Replacement**

47.5 **Allow for replacing the existing uPVC rainwater goods with a traditional pattern cast iron system.**

48.0 DECORATIONS (NORTH TRANSEPT MAIN ELEVATIONS)

48.1 **Air Bricks**

48.2 **Allow for decorating/re-decorating in Dulux Metalshield system.**

48.3 Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: "00 NN 25/000" Lead Grey.

48.4 **<u>Rainwater Goods</u>**

48.5 **Allow for decorating/re-decorating in Dulux Metalshield system.**

48.6 Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: "00 NN 25/000" Lead Grey.

NAVE NORTH CLERESTORY

49.0 MASONRY REPAIRS (NAVE NORTH CLERESTORY)

49.1 **Masonry Shoulder (Nave North Clerestory, East End)**

49.2 **Allow for providing new weathering detail to existing masonry shoulder.**

49.3 Allow for providing new weathering stone to existing masonry shoulder (currently used to site a lead rainwater tank). Stone weathering to be in limestone, with drips to underside at exposed (western and northern) edges. Angle of slope to match the existing buttress weatherings/offsets (at the base of the Tower to the north-east and south-east). For pricing purposes, assume limestone is a Totternhoe Stone, bedded in lime mortar. Confirm with Church Architect on-site.

50.0 RAINWATER GOODS (NAVE NORTH CLERESTORY)

50.1 **Nave North Clerestory – Re-Position Existing Rainwater Downpipe**

50.2 Allow for repositioning the existing eaves rainwater outlet (approx. 300mm further westwards) and extend down to the North Transept Roof (south-east corner). Allow for pipe, shoe, brackets, etc, in traditional cast iron system.

50.3 **North Transept Roof - Rainwater Catcher/Diverter**

50.4 See "New Leadwork to Parapet Gutters, Sumps, and Outlets" under LEADWORK (NORTH TRANSEPT ROOF) in "**ROOFS**".

51.0 DECORATIONS (NAVE NORTH CLERESTORY)

51.1 **Rainwater Goods**

51.2 **Allow for decorating/re-decorating in Dulux Metalshield system.**

51.3 Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: "00 NN 25/000" Lead Grey.

NORTH AISLE (WEST ELEVATION)

52.0 MASONRY REPAIRS (NORTH AISLE WEST ELEVATION)

52.1 **Making Good Around Earlier Pipe Penetrations**

52.2 **Allow for reconfiguring pipe penetration detail to wall.**

52.3 Allow for replacing damaged cast iron air brick and replacing with new cast iron air brick, with circular opening cut into grid to enable pipe penetrations to pass through.

52.4 Air Brick - Air brick to be the "Max6 Air Brick" (6"x4" – 225mm x 150mm) available from The Cast Iron Air Brick Company, Down Farm, Little Bray Lane, Brayford, Devon, EX32 7QQ. Telephone: (01598) 711999. E-mail: sales@castironairbricks.co.uk. Website: www.castironairbricks.co.uk.

52.5 Lime Mortar - Allow for bedding and pointing-up around air brick, and missing section of stone, in Lime Mortar #1 (sand aggregates).

52.6 Localised Rebuilding – Allow for infilling missing section of stone (in stone to match the existing.

53.0 DECORATIONS (NORTH AISLE WEST ELEVATION)

53.1 **Air Brick - Decoration**

53.2 **Allow for decorating/re-decorating in Dulux Metalshield system.**

53.3 Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: "00 NN 25/000" Lead Grey.

53.4 **Pipe Penetration Associated With Air Brick - Decoration**

53.5 **Allow for decorating exposed pipework in paint system to suit.**

53.6 Decorator to identify suitable paint system(s). Colour: Lead grey.

CHANCEL (EAST ELEVATION/GABLE)

54.0 MASONRY REPAIRS (CHANCEL EAST ELEVATION/GABLE)

54.1 **Chancel (East Elevation/Gable) – Pointing Repairs**

54.2 **Provisionally allow for pointing repairs to Chancel (East Elevation).**
Lime mortar to be Lime Mortar #1 (sand aggregates).

54.3 **Gable Copings** – Provisionally allow for raking out, preparing, and re-pointing open and/or failing joints

54.4 **Gable elevation from a line level with the eaves up to the gable cross base** – Provisionally allow an extra/over price for raking out, preparing, and re-pointing open and/or failing joints.

54.5 **East Elevation from window stringcourse up to a line level with the eaves** - Provisionally allow an extra/over price for raking out, preparing, and re-pointing open and/or failing joints

54.6 **Unforeseen Repairs**

54.7 Allow a provisional sum of £1,000 for unforeseen masonry repairs. Prov. Sum £1,000

CHANCEL (SOUTH ELEVATION)

55.0 LEADWORK (CHANCEL SOUTH ELEVATION)

55.1 **Chancel (South Elevation) – Provision of New Overflow**

55.2 **Allow for providing overflow pipe to the existing rainwater hopper.**

55.3 To the (modern) lead hopper (located at high level to the west side of the elevation), allow for discreet lead overflow pipe (set at 45 degrees horizontally, to help discharge rainwater away from the building when engaged). For pricing purposes, assume pipe is 50mm diameter and 200mm in length. Confirm detailing on site with the church architect before putting the works in hand.

SOUTH AISLE

56.0 MASONRY REPAIRS (SOUTH PORCH)

56.1 **South Aisle South Doorway – Stone and Pointing Repairs**

56.2 **Allow for minor masonry repairs to the stone plinths of the door opening.**

56.3 Allow form stone piece repairs to the sections of damage plinth, etc, either side of the door opening. Stone to match the existing. For pricing purposes, assume stone is a matching light/cream-coloured Bath stone. See drawing / marked-up photo for provisional scope of repairs. Final scope of the work to be agreed on site with the Church Architect. Lime mortar to be Lime Mortar #2 (stone dust).

56.4 **Allow also for minor pointing repairs to adjacent stonework.**

56.5 For pricing purposes, assume an aggregate area of ½m2 is to be re-pointed. Final scope of the work to be agreed on site with the Church Architect. Lime mortar to be Lime Mortar #1 (sand aggregates).

57.0 DECORATIONS (SOUTH PORCH)

57.1 **New Stonework – Patination/Touching-In**

57.2 **Allow for specialist patination work to the new stonework.**

57.3 Work to include minor patination / touching-in of new stonework, to help soften the initial difference in appearance of the new stone against the old. Work to be undertaken with colour matched-limewashes to ensure full breathability is maintained. Final scope of the work to be agreed on site with the Church Architect, however, for pricing purposes, assume an area of ½m2 only is to be patinated/touched-in. A note on the works carried out is to be included in a single project 'Conservator's Report'.
Work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.

DRAINAGE

Contents:

58.0 DRAINAGE APRON AND ADJUSTMENTS TO EXTERNAL GROUND

58.1 Allow for removal of existing (failing) brick drainage apron (to assist how the building fabric manages moisture - at present the apron lets water through into the ground, but severely restricts subsequent evaporation (resulting in increased moisture levels in the adjacent walls/floors).

58.2 Allow for removing the existing brick drainage apron, including sub-base, etc.

58.3 Trial Holes - The Structural Engineer has indicated that a reduction of ground levels of approximately 75mm should not affect the foundations at the church. However, provisionally allow for 2no. trial holes to be excavated, as shown on the drawings. Structural Engineer to confirm on-site whether these trial holes will be required. Holes should be 600x600mm in plan, and 600mm (possibly more) deep. Allow for inspection by the Structural Engineer.

58.4 Archaeology - Due to the position of the trial holes (adjacent to the external walls) and their small size, it is thought unlikely that any archaeological discoveries will be made. However, if any discoveries are made, work should stop and the Church Architect informed immediately. Inspection by the Diocesan Archaeologist or a consultant archaeologist appointed by the PCC may be needed and the contractor should allow for this (see "Archaeology (Field/Building Archaeology)" under "GENERAL ITEMS").

58.5 Reinstatement of grass to perimeter of the building (to assist how the building fabric manages moisture - the grass will help moisture evaporate from the ground).

58.6 Allow for re-instating the exposed ground, including raking over and loosening surface, and providing new turf. For pricing purposes, allow for regular weekly watering of turf for the first four weeks. Allow for adjusting the ground levels to form a 1,000mm* strip along the length of the elevations (extending 1,000mm from the plinth of the wall). [*In places the strip extends to 1500mm, in others less than 1000mm.] The strip is to have a slight fall away from the building (to help prevent drawing water toward the building). For pricing purposes, assume finished ground level is to lie 75mm below the existing upper surface of the apron. Allow for grading adjacent ground immediately beyond the 1,000mm edge to the strip.

58.7 Removal of Areas of Tarmac and Reinstating Grass

Allow for removing the small areas of tarmac infill within the grass area between brick drainage area and footpath (north-west- and north-east corners of the building), and re-instating grass.

59.0 **<u>OPEN GULLIES</u>**

Where required, provide new open gullies (& connections) to the existing drainage (to help re-instate a fully working rainwater/surfacewater drainage system)

59.1 Allow for forming new (untrapped) open gullies where shown, using Square Hopper with Horizontal Inlet, from Hepworth Clay Products (not plastic system). Allow for cast iron grid. Fit in accordance wit the manufacturers recommendations.

59.2 **Allow for re-using the existing open gullies and grids.**

59.3 Allow for re-using the existing open gullies, providing new kerb upstands (using bricks salvaged from the demolitions, bedded in lime mortar.)

60.0 **<u>DRAINAGE PIPEWORK</u>**

60.1 **Allow for carrying-out repairs to selected pipe sections where known to be subject to displacement, damage, etc (to help re-instate a fully working rainwater/surface-water drainage system).**

60.2 The following pipe locations were identified in the earlier drainage survey (see attached):
- 1.4m downstream from gully G1 (north-east corner of Chancel)
- 9.7m downstream from gully G3 (north-west corner of North Transept)
- 2.3m and 9.8m downstream from gully G6 (south-west corner of South Transept)

60.3 **Provisionally allow for additional pipework repairs** — Prov. Sum £1,000

60.4 Other locations may be identified during the course of the work, when remaining blockages are cleared, and the Contractor should allow a provisional sum of £1,000 for such additional repairs. Confirm details with the Church Architect on-site.

60.5 **Removal of hard to clear silt deposits, tree roots, etc. (to help re-instate a fully working rainwater/surfacewater drainage system).**

60.6 Allow for removing hard to clear deposits using specialist drainage tools where appropriate (possibly including, for example, a vortex cutting tool).

60.7 **Extra/over removal/repair work**

60.8 Where hard to clear deposits cannot be removed, allow for excavating and lifting pipework, clearing deposits, replacing clay pipework, backfilling and reinstating surfaces. For pricing purposes, assume an aggregate length of 9m (say 3 x 3m lengths) of pipework are to be so lifted and replaced, etc.

60.9 **Allow for completing previous survey of drainage.**

60.10 Allow for completing survey of drainage (previously prevented by the hard to clear deposits). Survey to include CCTV of the remaining sections.

61.0 SOAKAWAYS

61.1 Allow for re-excavation, clearing, and re-instatement of the existing soakaways (to help re-instate a fully working rainwater/surfacewater drainage system).

61.2 For pricing purposes, assume soakaway to consist of 1.5m^3 granular material, enclosed by Terram geotextile material, backfilled with approximately 300mm deep top soil. Tamp down and sow grass seed over.

61.3 Allow for identifying soakaway locations using Sonde/CCTV

61.4 Initially, where previous hard to clear deposits have been removed, allow for use of 'Sonde' detector and CCTV to identify precise location of soakaways.

61.5 Allow for identifying soakaway locations by pipe excavation

61.6 Where pipework remains blocked, provisionally allow for re-excavating the pipe connections downstream from gullies G1 (north-east corner of Chancel) and G8 (south-east corner of Chancel) to the two soakaways (see drawing for the assumed route.

61.7 Archaeology - As the ground in which the pipework sits has already been dug, it is thought unlikely that any archaeological discoveries will be made. However, if any discoveries are made, work should stop and the Church Architect informed immediately. Inspection by the Diocesan Archaeologist or a consultant archaeologist appointed by the PCC may be needed and the contractor should allow for this (see "Archaeology (Field/Building Archaeology)" under "GENERAL ITEMS").

61.8 Allow for provision of silt traps and rodding access (to help extend the working life of the soakaways and provide easy access for future rodding).

61.9 Allow for (approximate 300mm diameter) inline silt trap/catchpit (and removal bucket/clearance tool) at the entrance to each soakaway. Allow for associated access cover.

INTERIOR ACCOMMODATION

Contents:

TOWER BELFRY (UPPER AND LOWER LEVELS)

Section Contents

TOWER BELFRY (UPPER AND LOWER LEVELS)

62.0 MASONRY REPAIRS (TOWER BELFRY)

62.1 **Note**

62.2 A light touch to masonry repairs is envisaged - whilst there are a number of places where minor repairs are needed, the condition of most of the fabric appears to be broadly stable, and not at significant risk – limited intervention is thought appropriate to help retain the existing historic character of the space.

62.3 **Plaster Repairs (To Inside Wall Surfaces)**

62.4 **Allow for minor plaster repairs to the inside wall surfaces within the Tower Belfry.**

62.5 Allow for buttressing open/fragile edges of the remaining sections of existing plaster. For pricing purposes, assume 3 linear metres of buttressing is to be carried out. Plaster to be lime plaster to match the existing (assume generally as Lime Mortar #1).

62.6 **Pointing Repairs (To Inside Wall Surfaces)**

62.7 **Allow for minor pointing repairs to the inside wall surfaces within the Tower Belfry.**

62.8 For pricing purposes allow for the following:

i) To the wall top, allow for raking out all failing or open joints, and re-pointing in Lime Mortar #1 (assume 50% of: the upper 300mm of the face of the wall and the top of the wall to a depth of 150mm),

ii) To the main wall surfaces, allow for raking out all failing or open joints, and re-pointing in Lime Mortar #1 (assume an aggregate area of $5m^2$);

iii) To the main wall surfaces, allow for raking out all cracks, and re-pointing in Lime Mortar #1 (assume an aggregate length of 10m).

62.9 **Localised Rebuilding (To Wall Tops)**

62.10 **Allow for minor localised rebuilding to the existing wall tops.**

62.11 Allow a provisional sum of £500 for small areas of localised rebuilding. Where replacement material is required, this is to match the adjacent fabric - this could be small pieces of Totternhoe stone, small cobble local ironstone cobbles/fieldstones, traditional soft red clay brick). Masonry to be bedded in Lime Mortar #1. Prov. Sum £500

62.12 **Windows – Masonry Repairs**

62.13 See under WINDOWS / OPENING

63.0 INTERNAL REDECORATIONS (TOWER BELFRY)

63.1 **Note**

63.2 **Historic Wall Decorations –** It is thought very unlikely that there are any historic wall paintings or polychrome present within the Tower Belfry. However, the work described in this section will still need to be undertaken with caution by the Main Contractor and any discoveries brought to the attention of the Architect immediately.

63.3 **Metal Guard Rails To Belfry Lower Level North- and South Windows**

63.4 See under WINDOWS / OPENINGS.

63.5 **Ironmongery To Belfry Lower Level North- and South Windows**

See under WINDOWS / OPENINGS.

63.6 **Handholds to Belfry Floor Access Hatch**

See under ACCESS IMPROVEMENTS.

63.7 **Ironmongery to Belfry Floor Hatch**

See under ACCESS IMPROVEMENTS.

63.8 **Belfry Steel Bellpit**

63.9 **Redecorate existing steel bellpit to north-east corner of bellframe.**

63.10 Decorate in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: To match the existing (red).

64.0 ACCESS IMPROVEMENTS (TOWER BELFRY)

64.1 **Roof Access Hatch – Access Improvements**

See under **ROOFS**.

64.2 **Belfry Access Ladders – Minor Repairs**

Allow a provisional sum of £100 for minor timber repairs to the access ladders. Prov. Sum £100

64.3 **Belfry Floor Access Hatch – Access Improvements**

Allow for proving access improvements (handholds, timber pull, counter-balance, etc.

64.4 **Handholds to side of hatch opening** - Allow for providing 3no. horizontal handholds fixed to the face of the adjacent east wall (to the east side of the floor hatch). Handholds to be simple, purpose-made, U-shaped, forged steel handholds rails, fixed with stainless steel fixings into the internal face of the Belfry east wall. Length: 600mm long. Projection: approx. 50mm. Diameter: 12mm. Heights to be 300mm, 600mm, and 900mm. Decorate in Dulux Metalshield system. Allow for all

preparation work, primer and number of coats recommended by the manufacturer). Colour: Black

64.5 **Timber pull for hatch** - Allow for providing new timber pull to the underside of the existing floor hatch.

64.6 **Counter-balance for hatch** - Allow for providing purposed-made counter-balance to aid opening of Belfry floor access hatch (using traditional sash weights, rope and pulley).

64.7 **Overhaul ironmongery to hatch** – allow for easing and overhauling ironmongery, including applying Renaissance wax to exposed surfaces.

64.8 **Belfry Upper Level – Provision of Handrails (North, South, and West Walls)**

64.9 **Allow for providing handrail to aid access around the top of the bellframe.**

64.10 Handrails to be traditional timber mopstick handrails mounted on traditional brackets to suit. Handrails to run broadly the length of the north, south, and west walls (stopping approximately 300mm short of the adjacent wall returns). Height: 1,100mm above top of bell frame. Brackets to be traditional style antique/forged black iron brackets (Colour: Black).

64.11 **Lighting**

See under ELECTRICAL INSTALLATION

65.0 WINDOWS / OPENING (TOWER BELFRY)

65.1 **Belfry Upper Level – Belfry Lights (All) – Repairs to Flyscreen Mesh and Frames**

Allow for inspection and minor repairs to the existing flyscreen mesh and timber frames.

For pricing purposes assume all of the bird/flyscreen mesh is to be replaced. Allow for all fixings, accessories, replacement battens to the rear, etc.

65.2 **Belfry Lower Level - South Window – Repair/Replacement**

Allow for replacing the damage glazing and making good.

Allow for removing the existing broken glass sheets, and replacing with new to match the existing. Allow for providing a sample for approval. Make good mortar fillets to inside and out in Lime Mortar #1. Final detail for external sill/weathering to be agreed on-site with the Church Architect.

65.3 **Provisionally allow an extra/over price for replacing glazing with new timber windows.**

Window to be purpose-made, square-headed, inward-opening casement window, located immediately behind the existing masonry opening, constructed using traditional

timber joints, etc. Glass line to jambs and head to match the existing masonry opening. Sill detail to be discussed and agreed on-site with the Church Architect. All new timber is to be best joinery-quality untreated English oak, unless otherwise stated. Timber is to be seasoned as necessary to suit the application. Provide shop drawings for approval and check all dimensions on site before ordering materials or putting work in hand. Timber beads to be fixed with austenitic stainless steel pins. Vertical beads are to stop 3mm short of the bottom bead to assist rainwater run-off. Supply and fit 2no. "H"-type cabinet hinges (height to be 100mm, open width to be approximately 50mm), and 1 no. casement catch and hook. Casement catch and hook, and hinges are to be manufactured from forged mild steel. All ironmongery fixings are to be austenitic stainless steel wood screws (ie. dome headed). Supply and fit 6mm plain glazing to the new window frame (glass to be reamy glass, with some figure within it – it is important that the glass is not flat and without any character – allow for providing sample to the Church Architect for approval. The glazing method to be employed is a "dry-glaze" drained and ventilated method. Pre-formed proprietary EPDM/rubber strips are to be fitted to the glazing rebates and the rear face of the glazing beads, before the glass is fitted in place. Ensure a tight seal is achieved. These gaskets are to be tightly butted at corners to ensure a good joint. The glazing is to rest on EPDM/rubber wedges. Allow a 3mm gap around the glass to permit ventilation and the drainage of any rainwater and/or condensation. EPDM/rubber strips are available from 'Sealmaster', Pampisford, Cambridgeshire on telephone (01223) 832851. Other equivalent suppliers will also be acceptable. The frame is to be screw fixed to existing window reveal using austenitic stainless steel fixings. Fixings holes through to the frame are to be given timber plugs. Ensure that all sections of timber in contact with plaster, mortar, or stonemasonry, etc., are protected with damp-proofing material. New English oak joinery is to be left unfinished. Ironmongery to be decorated in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: Black.

65.4 Allow for Re-configuring the Guarding to the Window Reveal

Allow for removing the existing informal guarding at Belfry floor level:

- Allow for removing the broadly horizontal timber frame within the reveal) and making good;
- Allow for removing part of the vertical boarding fixed across the inside face of the Belfry south wall at low level. Retain the bottommost board (so that it can act as a toeboard/debris check at the edge of the floor and prevent debris falling over and down into the Sound Deadening Chamber below – provide thin timber batten to the rear to ensure there is no gap between the board and the floor);
- Provide 2no. simple, purpose-made, approx. 12mm diameter forged steel guard rails, fixed with stainless steel fixings into the internal face of the Belfry south wall (heights to be confirmed on site, but anticipated to be 600mm and 900mm). Decorate in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: Black

65.5 **Belfry Lower Level - North Window – Repair/Replacement**
Allow for minor repairs
Allow for minor repairs to mortar fillets and cleaning down existing glazing.

65.6 **Provisionally allow an extra/over price for replacing glazing with timber window.**
Details as South Light above.

65.7 **Belfry Lower Level - East Window – Repairs**
Allow for minor repairs
Allow for minor repairs to mortar fillets and cleaning down existing glazing.

65.8 **Provisionally allow an extra/over price for replacing glazing with timber window.**
Details as South Light above (but with northern edge to frame built into the masonry – with the existing in-fill/making good carefully removed).

65.9 **Belfry Lower Level - West Opening (Internal Opening to Nave) – Repairs to Hatch**
Allow for easing and overhauling the existing access timber hatch to the Nave.
Allow for ironmongery to be oiled and Renaissance wax applied to the surfaces.

66.0 ELECTRICAL INSTALLATION (TOWER BELFRY)

66.1 **Inspection, Reporting, Alterations and Repairs**
Allow for inspection, reporting, alterations and repairs to the existing electrical installation within the belfry.

66.2 **Inspection and Reporting (Generally)** - Allow for electrician to inspect and report on the existing installation.

66.3 **Repairs to the existing installation (Generally)** - Allow a provisional sum of £250 for repairs to the existing installation, replacement bulbs, etc. Prov. Sum £250

66.4 **Replacement light fittings (Belfry Upper Level)** - Provisionally allow for replacing existing fittings (unguarded fluorescent strip lights currently located on the east and west walls) with new bulkhead fittings (with a minimum light output to match the existing. Fitting to match the existing bulkhead fittings within the Tower. Fittings to be switched with the rest of the Tower lights.

66.5 **Additional Light Fittings (Belfry Upper Level)** - Provisionally allow for providing two additional bulkhead fittings (to be located in the same positions on the north and south walls). Fitting to match the existing bulkhead fittings within the Tower. Fittings to be switched with the rest of the Tower lights.

66.6 **Additional Light Fitting (Belfry Lower Level)** – Provisionally allow for providing new bulkhead light fitting (to be located on the south wall, at shoulder height, in line with the Belfry access ladders. Fitting to match the existing bulkhead fittings within the Tower. Fitting to be switched with the rest of the Tower lights.

67.0 OTHER (TOWER BELFRY)

67.1 **Bells – Provision of New Lifting Beam**

Allow for providing new beam to assist future lifting/lowering of bells, etc.

Provide new beam to Structural Engineer's details. Final details to be confirmed by the Structural Engineer and Church Architect but, for pricing purposes, assume 254mm x 146mm x 43 UB universal beam, with each end sat on padstones located on wall top. The existing concrete wall top may be sufficient to act as a padstone. Beam ends to be either built-in or packed-up to ensure there is no play during use. Confirm all details with the Structural Engineer prior to ordering/putting work in hand.

67.2 **Floor, etc - Clearing Out Debris**

Allow for clearing all dust, debris, nesting material, etc, from Tower Belfry.

It is unlikely that there is anything that might be of historic value or of other use or interest, etc, but allow for confirming with Church Architect and the Churchwarden before any item is disposed of).

IMPORTANT NOTE: An asbestos survey was undertaken in October 2019 by independent asbestos surveyors, Walker and Turpin Consultants. Their report dated 14th October 2019 (see Appendices) identified the presence of asbestos containing roof felt debris on the floor of the Belfry. Allow for asbestos containing materials (and any dust/debris on the floor) to be removed by licenced asbestos removal specialists.

67.3 **Existing (Loose) Leaded Lights Panels – Provision of Timber Box(es) to House Leaded Lights**

Allow for proving new timber box(es) with to house leaded lights.

Box(es) to have hinged lid to house the loose panels of leaded lights stored in the opening to the west of the space. Timber species to joiner's recommendation. Timber to be untreated.

TOWER SOUND DEADENING CHAMBER

Section Contents

TOWER SOUND DEADENING CHAMBER

68.0 MASONRY REPAIRS (TOWER SOUND DEADENING CHAMBER)

68.1 **Note**

A light touch to masonry repairs is envisaged - whilst there are a number of places where minor repairs are needed, the condition of most of the fabric appears to be broadly stable, and not at significant risk – limited intervention is thought appropriate to help retain the existing historic character of the space.

68.2 **Plaster Repairs (To Inside Wall Surfaces)**

Allow for minor plaster repairs to the inside wall surfaces within the Chamber.

Allow for repairs to various small sections of damaged lime plaster, including buttressing open/fragile edges. For pricing purposes, assume an aggregate area of $3m^2$ is to be repaired. Plaster to be lime plaster to match the existing (assume generally as Lime Mortar #1).

69.0 INTERNAL REDECORATIONS (TOWER SOUND DEADENING CHAMBER)

69.1 **Generally**

Provisionally allow for internal redecoration of the Tower Sound Deadening Chamber, to include preparation, cleaning, limewashing, and other decorations noted below.

69.2 **Note**

Historic Wall Decorations – It is thought very unlikely that there are any historic wall paintings or polychrome present within the Tower Sound Deadening Chamber. However, the work described in this section will still need to be undertaken with caution by the Main Contractor and any discoveries brought to the attention of the Architect immediately.

69.3 **Preparation and Cleaning**

Allow for all preparation and cleaning work.

Walls - Ensure all painted surfaces are prepared for redecoration by careful removal of all flaking paintwork, cobwebs, etc.

69.4 Other - Whilst not to be painted, ensure that all other surfaces (including roof timberwork, joinery fittings, stonework, wall memorials, windows, floor, electrical fittings, wiring, etc), are carefully brushed down to remove dust, cobwebs, etc. Allow for reporting on any loose material, repairs needed, etc.

69.5 **Limewashing**

Allow for limewashing and surfaces previously limewashed

69.6 Limewash Trial – Allow for a separate limewash trial to help assess the compatibility with the existing surfaces is to be undertaken at the earliest opportunity (once Faculty Approval and approval from the PCC is given). Allow for three small panels of lime-wash to be applied (in different locations). The mix is to be the same as detailed elsewhere in this specification.

Limewash - Redecorate in a minimum of three coats of limewash (lime putty diluted to limewash with pigment added) to match existing. Absolutely no additional binder is to be employed in the mix. New plaster surfaces may require additional coats of limewash to ensure they match the existing, and the Decorator should allow for this. Limewash is to be made from lime putty diluted to limewash with pigment added – there is to be absolutely no binder other than lime used. Apply limewash, working over the surface to achieve saturation of the surface. Only, those surfaces that have previously been decorated are to be redecorated. For pricing purposes, assume that the colour of the walls is to be natural white (no pigment) to match the existing (to be confirmed on site with the Architect).

69.7 **Other Redecorations**

Allow for all other redecorations, where required.

69.8 **Conduits, Wiring, Cover Plates, etc.** - Existing electrical conduit and wiring is to be carefully prepared, primed, and painted in a suitable paint system, colour matched to the surface over which it passes.

69.9 **Hatch** - Hatch to be a traditional timber hatch constructed in softwood to match other hatches in the Tower. Allow for traditional T-hinges along the longest side of the hatch. Softwood to be untreated heartwood of European larch. Timber to be left untreated, however, the ironmongery is to be decorated in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: Black.

69.10 **Floor Access Opening – Provision of New Timber Hatch**

Allow for providing new timber hatch to protect the existing floor opening, complete with timber pull, counter-balance, and handhold.

69.11 **Provisional Sum** - Allow a provisional sum of £250 for and unforeseen redecoration work.

Prov. Sum £250

69.12 **Hinges to New Timber Floor Hatch**

See under ACCESS IMPROVEMENTS

70.0 ACCESS IMPROVEMENTS (TOWER SOUND DEADENING CHAMBER)

70.1 **Access Ladder #1 (Access Up To Belfry) – Minor Repairs**
Allow a provisional sum of £100 for minor timber repairs to the access ladders. Prov. Sum £100

70.2 **Access Ladder #2 (Down To Tower Steps/Passageway) – Minor Repairs**
See under **TOWER STEPS/PASSAGEWAY**.

70.3 **Timber pull for hatch** - Allow for providing new timber pull to the underside of the existing floor hatch.

70.4 **Counter-balance for hatch** - Allow for providing counter-balance to aid opening of Belfry floor access hatch (using traditional sash weights, rope and pulley).

70.5 **Handhold to side of hatch opening** - Allow for providing 2no. horizontal handhold fixed to the face of the adjacent east wall (to the east side of the floor hatch, north end). Handholds to be simple, purpose-made, U-shaped, forged steel handholds rails, fixed with stainless steel fixings into the internal face of the Belfry east wall. Lengths: 1 x 300mm and 1 x 600mm long. Projection: approx. 50mm. Diameter: 12mm diameter. Heights to be 300mm and 600mm. Final position to be confirmed on-site with the Church Architect. Decorate in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: Black

70.6 **Lighting**
See under ELECTRICAL INSTALLATION

71.0 ELECTRICAL INSTALLATION (TOWER SOUND DEADENING CHAMBER)

71.1 **Inspection, Reporting, Alterations and Repairs**
Allow for inspection, reporting, alterations and repairs to the existing electrical installation within the Sound Deadening Chamber.

71.2 **Inspection and Reporting (Generally)** - Allow for electrician to inspect and report on the existing installation.

71.3 **Repairs to the existing installation (Generally)** - Allow a provisional sum of £250 for repairs to the existing installation Prov. Sum £250

71.4 **Additional Light Fitting** - Provisionally allow for providing an additional bulkhead fittings (to be located on the east wall adjacent to the access ladder (up to the Belfry), at the same height as the existing bulkhead (final position to be agreed on site with the Church Architect). Fitting to match the existing bulkhead fittings within the Tower. Fitting to be switched with the rest of the Tower lights.

72.0 OTHER (TOWER SOUND DEADENING CHAMBER)

72.1 **Floor, etc - Clearing Out Debris**

Allow for clearing all dust, debris, etc, from the Sound Deadening Chamber.

It is unlikely that there is anything that might be of historic value or of other use or interest, etc, but allow for confirming with Church Architect and the Churchwarden before any item is disposed of.

IMPORTANT NOTE: An asbestos survey was undertaken in October 2019 by independent asbestos surveyors, Walker and Turpin Consultants. Their report dated 14th October 2019 (see Appendices) identified the presence of asbestos containing materials on the floor of the Belfry, but there may be a chance that some material has fallen down to the Sound Deadening Chamber. Allow for asbestos containing materials (and any dust/debris on the floor) to be removed by licenced asbestos removal specialists.

72.2 **Floor – Minor Timber Repairs**

Allow for carrying out minor timber repairs to the floor.

Repairs to be undertaken in match timber, with missing or damaged timber cut out and replaced. For pricing purposes assume 3no. repairs of approx. 400mm in length.

TOWER STAIR PASSAGE

Section Contents

TOWER STAIR PASSAGE

73.0 MASONRY REPAIRS (TOWER STAIR PASSAGE)

73.1 **Note**

A light touch to masonry repairs is envisaged - whilst there are a number of places where minor repairs are needed, the condition of most of the fabric appears to be broadly stable, and not at significant risk – limited intervention is thought appropriate to help retain the existing historic character of the space.

73.2 **Plaster Repairs (To Inside Wall Surfaces)**

Allow for minor plaster repairs to the inside wall surfaces.

Allow for buttressing open/fragile edges of the remaining sections of existing plaster. For pricing purposes, assume 3 linear metres of buttressing is to be carried out. Plaster to be lime plaster to match the existing (assume generally as Lime Mortar #1).

73.3 **Pointing Repairs (To Inside Wall Surfaces)**

Allow for minor pointing repairs to the inside wall surfaces, including open joints / cracks around junction of south transept and Tower (around opening), vertical crack adjacent to upper light, and around the glazing timber panelling adjacent to the upper timber steps. For pricing purposes allow in Lime Mortar #1 (assuming an aggregate length of 10m).

73.4 **Stone Steps (Main Stair Only) - Repairs**

Allow for conservation repairs to the existing treads to stone steps.

Allow for carefully removing all hard, cementitious mortar. Carry out plastic mortar repairs to treads (building up original profile), using specialist conservation mortar (a geopolymer - appropriate here because it is breathable to varying degrees depending on design/mix adopted, retains flexibility but is still hard-wearing, and can be colour-matched to the existing limestone). Reform original profile of tread to ensure firm level surface to improved safe access. A note on the works carried out is to be included in a single project 'Conservator's Report'.

This work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.

73.5 **Allow for conservation repairs to the existing risers to stone steps.**

Allow for lime mortar repairs to surface of upper passage floor. Repairs to be undertaken in lime mortar (Lime Mortar #1).

73.6 **Upper Passage Floor – Mortar Repairs**

Allow for lime mortar repairs to surface of upper passage floor.

Repairs to be undertaken in lime mortar (Lime Mortar #1).

73.7 **Upper Passage Floor – Stone Replacement**

Provisionally allow for small stone replacement.

Provisionally allow for 1no. stone replacement (to be confirmed on-site with the Church Architect). For pricing purposes, assume stone to be 100x200mm in plan area, by 100mm thick. Stone to be limestone to match the existing. – allow for providing a sample for approval). Stone to be bedded in lime mortar (Lime Mortar #1).

73.8 **East Windows (Upper and Lower Lights) – Repairs**

Allow for repairs to both windows to east wall.

Remove existing mortar fillet, glass sheet, and perforated timber screen. Clean opening, glass, and timber screen. To the lower light, carry out mortar repairs to the sill. Re-fit timber screen and glass and remake mortar fillet (Lime Mortar #1) and ensure windows (including external sill details) are weathertight.

73.9 **Doorway (Doorway From The South Transept) – Stone Repairs**

See under WINDOWS / DOORS.

74.0 ACCESS IMPROVEMENTS (TOWER STAIR PASSAGE)

74.1 **Timber Steps (Access Up To Sound Deadening Chamber) – Provision of Handrail**

Allow for providing (ship's ladder-type) handrail to the side of the timber steps.

Handrail to be a single rail fixed to eastern string to the steps. Handrail to be simple, purpose-made, U-shaped (with single intermediate support), forged steel rail, fixed with stainless steel fixings into the timber string. Length: To be confirmed on-site with the Church Architect, but anticipated to be the length of the timber steps. Projection above string: Approx. 50mm. Diameter: 12mm. Decorate in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: Black

74.2 **Timber Steps (Access Up To Sound Deadening Chamber) – Minor Repairs**

Allow a provisional sum of £100 for minor timber repairs to the timber steps. Prov. Sum £100

74.3 **Stone Steps – Provision of Handrail**

Allow for providing new fixed handrail to the west side of the stone stair.

Allow for providing 1no. inclined handrail fixed to the west wall of the stair. Handrail to be simple, purpose-made, U-shaped (with intermediate supports at approx. 600mm centres), forged steel handrail, fixed with stainless steel fixings into the west wall (unlike the east wall, the west wall appears to be largely free of any stonework with graffiti or other special significance, but the Contractor will need to carry out a final check that no fixings will damage such stonework) Length: To be approx. the full inclined length of the stone stairs, with a horizontal section at top end projecting 300mm beyond the top and bottom steps. Projection of rail from wall: approx. 50mm. Diameter: 12mm. Height to be 1,000mm above the nosing line of the steps. Decorate in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: Black

74.4 **Upper Passage Floor – Provision of Guard Gate**

Allow for providing simple self-closing metal gate guard to the top of the stone steps.

Gate guard to be purpose-made, with self-closing leaf and keep/restrictor to retain gate leaf in position when closed. Height to be 1,100mm above passage floor level. Hinge to be located on the west wall, keep/restrictor on the east wall. Final horizontal location to be confirmed on-site with the Church Architect. Allow for providing shop drawing for approval before putting work in hand. Decorate in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer). Colour: Black

74.5 **Upper Passage Floor - Repairs**

See under MASONRY REPAIRS (TOWER STAIR PASSAGE)

74.6 **Stone Steps - Repairs**

See under MASONRY REPAIRS (TOWER STAIR PASSAGE)

74.7 **Lighting**

See under ELECTRICAL INSTALLATION.

75.0 INTERNAL REDECORATIONS (TOWER STAIR PASSAGE)

75.1 **Timber Door (Doorway From The South Transept) - Redecorations**

See under WINDOWS / DOOR (TOWER STAIR PASSAGE).

75.2 **Handrail To Timber Steps - Redecorations**

See under ACCESS IMPROVEMENTS (TOWER STAIR PASSAGE)

75.3 **Handrail Stone Steps - Redecorations**

See under ACCESS IMPROVEMENTS (TOWER STAIR PASSAGE)

75.4 **Metal Guard Gate – Redecorations**

See under ACCESS IMPROVEMENTS (TOWER STAIR PASSAGE)

76.0 WINDOWS/DOOR (TOWER STAIR PASSAGE)

76.1 **East Windows (Upper and Lower Lights) – Repairs**

See under MASONRY REPAIRS (TOWER STAIR PASSAGE)

76.2 **Doorway (Doorway From The South Transept) – Stone Repairs**

Allow for stone piece repairs to the jambs of the doorway (door reveal, etc.).

New stone to match the existing. For pricing purposes, assume new stone to be Totternhoe stone (allow for sample for approval by the Church Architect). Allow for carefully handtooling with a drag to remove saw mark, etc and match surrounding original dressed stonework. Allow for bedding in lime mortar (Lime Mortar #2). If necessary, allow for pinning with stainless steel pins).

76.3 **Timber Door (Doorway From the South Transept) – Repair & Redecorations**

Allow for repairs and redecorations to timber door.
Allow for easing, overhauling, minor repairs, and redecorations to the existing timber door to the Tower steps (South Transept). Allow for providing new draft excluder to edge of door (provide sample for approval by the Church Architect). Allow for oiling the North Aisle Door, with a mix of boiled linseed oil and natural turpentine. Allow for all preparation work as required. Allow for easing and overhauling ironmongery including applying Renaissance wax to exposed surfaces (including lock/latch keeps).

77.0 ELECTRICAL INSTALLATION (TOWER STAIR PASSAGE)

77.1 **Inspection, Reporting, Alterations and Repairs**

Allow for inspection, reporting, alterations and repairs to the existing electrical installation within the belfry.

77.2 **Inspection and Reporting (Generally)** - Allow for electrician to inspect and report on the existing installation.

77.3 **Repairs to the existing installation (Generally)** - Allow a provisional sum of £250 for repairs to the existing installation. Prov. Sum £250

77.4 **Remove redundant fitting, etc.** – Allow for removing redundant electric light fitting and wiring (located at the top of the stone steps, at high level).

77.5 **Additional Light Fitting** - Provisionally allow for providing an additional bulkhead fittings (to be located on the east wall adjacent to the access ladder (up to the Tower Sound Deadening Chamber). Final position to be agreed on site with the Church Architect. Fitting to match the existing bulkhead fittings within the Tower. Fitting to be switched with the rest of the Tower lights.

78.0 OTHER (TOWER STAIR PASSAGE)

78.1 **Floor, etc - Clearing Out Debris**

Allow for clearing all dust, debris, nesting material, etc.
Any loose stones to be retained for re-bedding. Allow for retaining anything that might be of historic value or of other interest, etc (confirm with Church Architect before any item is disposed of).

78.2 **Warning Notice**

Allow for providing warning notice at the bottom of the Tower Stair Passage.
Notice to be commercially produced safety sign, designed in accordance with the 'Health and Safety (Safety Signs and Signals) Regulations 1996'.
Notice to be located on the east wall, at chest height, in line with the bottom step, and secured using stainless steel fixings (final location to be agreed on-site with the

Church Architect). It is understood that the warning notice will comprise the following:

- Yellow 'warning' triangles, identifying such hazards as, for example, 'General danger', 'Trip hazards', 'Unprotected edges/drop';
- Red 'prohibition' sign: 'No admittance. Authorised personnel only';
- Blue 'mandatory' sign: 'Door to be kept locked'.

Allow for providing draft layout (with indication of size) for comment by the PCC, prior to putting the work in hand (PCC to check against their Tower access risk assessment).

SOUTH TRANSEPT

Section Contents:

SOUTH TRANSEPT

79.0 MASONRY REPAIRS (SOUTH TRANSEPT)

79.1 **Structural Repairs to the East Wall**
Allow for structural repairs to the South Transept East Wall.
Work specified by the Structural Engineer includes the following:

- Installation of 4no. rows of Helifix 'Hellibar' reinforcement to masonry above the central niche;
- Installation of 2no. Helifix 'Cemties' to pin fractured stonework to soffit of central niche.

See Appendices for Structural Engineer's report/specification dated 6th April 2022 for further details. Allow for discussion on-site with the Structural Engineer and Church Architect.

79.2 Allow for all builder's work in connection with the above works, including forming chases and drilling holes in masonry for the Helifix components, and making good masonry upon completion, including plaster and stone repairs.
Making good to stonework on the central niche to be undertaken by specialist conservator Matthew Beesley of Gem Conservation. See "Conservation & Repair Work to Niches, Piscina, Aumbry, South Window, Doorway, etc." below. A note on the works carried out is to be included in a single project 'Conservator's Report'

79.3 **Structural Repairs to the South Window Head, etc.**
See "MASONRY REPAIRS (SOUTH TRANSEPT)" in "**EXTERNAL WALLS**".

79.4 **Conservation & Repair Work to Niches, Piscina, Aumbry, S.Window, Doorway, etc.**
Allow for conservation and repair work to selected stonework, etc.
Specialist conservator to undertake conservation and repair work to the east niches (2no.), east piscina, east wall shelf, east doorway, south aumbry, south window and associated stringcourse, high level (Totternhoe) stone corbels (3no.) and stringcourse to Crossing Arch (west side). Conservation work to include the following:

- a light conservation clean to stonework.
- re-pointing/micro-grouting open joints, cracks, fractures, etc. To selected stone sections where stone is fractured and at risk of fully detaching, allow for pinning with stainless steel pins.
- Allow for replacing missing or irrevocably damaged profiles in stone to match the existing. New stone to match the existing. For pricing purposes, assume new stone to be Totternhoe stone (allow for sample for approval by the Church Architect before putting work in hand). Allow for carefully handtooling with a drag to remove sawmarks, etc and match surrounding original dressed stonework. Allow for bedding in lime mortar (Lime Mortar #2). If necessary, allow for pinning with stainless steel pins or fixing as conservator recommends.
- Allow for removing any hard, cementitious 'modern' pointing, and re-point in lime mortar (Lime Mortar #2)
- to discoloured areas (following 'modern' interventions, etc), allow for patination with a matching stone coloured limewash;

- making good stonework to central niche following insertion of Helifix 'Cemties' (see "Structural Repairs to the East Wall" above.
- A note on the works carried out is to be included in a single project 'Conservator's Report'.

Work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.

79.5 **Plaster Repairs (Generally)**

Allow for re-plastering areas of failing or missing plaster.

Allow for repairs to various small sections of damaged lime plaster, including buttressing open/fragile edges, to areas shown on the drawings. Plaster to be lime plaster to match the existing (assume generally as Lime Mortar #1). New plaster to be self-coloured to match the existing (allow for providing sample for approval prior to putting the work in hand).

79.6 **Allow for miscellaneous minor repairs to areas of damaged plaster,**

Allow for repairs to various small sections of damaged lime plaster, including buttressing open/fragile edges, to areas shown on the drawings. For pricing purposes, assume an aggregate area of $3m^2$ is to be repaired. Plaster to be lime plaster to match the existing (assume generally as Lime Mortar #1). As above, new plaster to be self-coloured to match the existing.

79.7 **Allow for pointing repairs to the existing plaster.**

Allow for raking out all failing or open joints, cracks, etc, and re-pointing in Lime Mortar #1 (assume an aggregate length of 20m). As above, new plaster to be self-coloured to match the existing.

79.8 **Allow for conservator to undertake breathability test of the existing plaster.**

Work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.

79.9 **South Transept (South Wall) – High Level Repairs**

Allow provisional sum for anticipated high level repairs. Prov. Sum £2,500

It is anticipated that high level repairs will be needed as a result of the proposed structural repairs to the South Transept (South Elevation) – See under **EXTERNAL WALLS**. However, the full scope and extent of the works in not known at this stage (though plaster repairs, localised rebuilding of wall masonry, and repairs to the dressed stonework of the window are possible). The Contractor should allow a provisional sum of £2,500 for such works (and associated scaffolding costs). The final scope and extent of the work is to be agreed on-site with the Structural Engineer and Church Architect.

80.0 INTERNAL REDECORATIONS (SOUTH TRANSEPT)

80.1 **Note**

Historic Wall Decorations – It is thought very unlikely that there are any historic wall paintings or polychrome present within the South Transept (plaster is late-Victorian in origin, and is self-coloured with no paint finish applied). However, the work described in this section will still need to be undertaken with caution by the Main Contractor and any discoveries brought to the attention of the Architect immediately.

80.2 **Plasterwork – Patination / Touching-In**

Allow for specialist remedial patination work to the interior plasterwork.
Work to include patination / touching-in, only where necessary, of any new work or existing work which is discoloured or poorly undertaken originally. Work to be undertaken with colour matched-limewashes to ensure full breathability is maintained. Final scope of the work to be agreed on site with the Church Architect, however, for pricing purposes, assume all of the interior will require specialist decoration work.
Work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.

80.3 **Roof/Ceiling Timberwork - Touching-In**

Allow for localised touching-in of roof structure / ceiling timberwork.
Allow for work needed where localised discolouration has occurred (due to rainwater ingress). For pricing purposes, assume work to $3m^2$ of timber boarding to the ceiling, and $2m^2$ to the roof structure. Final details to be agreed with the Church Architect on-site.

80.4 **Heating Pipes, Radiator, etc. - Redecorations**

Allow for redecorating the existing radiator and heating pipes at low level.
Allow for paint system (and colour) to match the existing. Allow for all preparation work, primer and number of coats recommended by the manufacturer).

80.5 **Window Opening Vent – Decoration**

See under WINDOWS / DOOR (SOUTH TRANSEPT)

80.6 **Timber Door (Doorway From The South Transept) - Redecorations**

See under WINDOWS / DOOR (TOWER STAIR PASSAGE).

81.0 WINDOWS / OPENINGS (SOUTH TRANSEPT)

81.1 **South Window – Provision of Window Opening Vent**

Provisionally allow for the insertion of a traditional window opening ventilator.
Allow for inserting a new traditional hopper window (to improve ventilation of the interior to the South Transept) in location shown on the drawings. Allow for fitting

metal mesh grille to top opening in order to prevent bird/insect ingress and unauthorised access. Allow for open/closure using pole hook (including provision of pole). Allow for all alterations to glazing to suit (including lead condensate tray). Hopper to be fitted by church glazing specialists. Allow for decorating in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer. Colour: Black.

81.2 **<u>South Window – Glazing, etc, Repairs</u>**
Allow provisional sum for unforeseen works to glazing.
The Contractor should allow a provisional sum of £1,500 for unforeseen works to glazing, ferramenta, etc. The final scope and extent of the work is to be agreed on-site with the Church Architect.

Prov. Sum £1,500

81.3 **<u>Conservation & Repair Work to South Window.</u>**
See under MASONRY REPAIRS (SOUTH TRANSEPT)

82.0 ELECTRICAL INSTALLATION (SOUTH TRANSEPT)

82.1 **<u>Inspection, Reporting, Alterations and Repairs</u>**
Allow for inspection, reporting, alterations and repairs to the electrical installation.

82.2 **Inspection and Reporting (Generally)** - Allow for electrician to inspect and report on the existing installation.

83.0 OTHER (SOUTH TRANSEPT)

83.1 **<u>Timber Floor – Inspection, Reporting, and Minor Repairs</u>**
Allow for inspection, reporting and minor timber repairs to the existing suspended timber floor. Work to include lifting of selected timber board to enable inspection and reporting on the floor structure, sleeper walls, underfloor void, air bricks, duct(s) through to other adjacent underfloor voids in the South Aisle or Crossing – also, clearing any debris that may have built up within the space, including around the air bricks (which might be restricting ventilation levels).

83.2 **<u>Timber Floor – Unforeseen Works</u>**
Allow provisional sum for unforeseen works to timber floor.
The Contractor should allow a provisional sum of £1,500 for unforeseen works to the timber floor. The final scope and extent of the work is to be agreed on-site with the Church Architect.

Prov. Sum £1,500

83.3 **<u>Wall Monument/Brasses</u>**
Allow for conservation clean to monument brasses to west wall.
The conservation clean is primarily to remove water staining (possibly from past rainwater ingress). A note on the works carried out is to be included in a single project 'Conservator's Report'.

Work is to be carried out by conservator Matthew Beesley of Gem Conservation (acting as your sub-contractor), 4 Mill Pond Drive, Upton, Northampton, Northamptonshire NN5 4EW. Telephone (07720) 763862. E-mail matthewbeesley67@yahoo.com.

NORTH TRANSEPT

Section Contents:

NORTH TRANSEPT

84.0 MASONRY REPAIRS (NORTH TRANSEPT)

84.1 **North Transept (South Wall) – High Level Repairs**
Allow provisional sum for anticipated high level repairs. Prov. Sum £2,500
It is anticipated that high level repairs may be needed if, upon inspection during the site works, the Structural Engineer requires structural repairs to be carried out similar to those currently proposed to the South Transept. However, the full scope and extent of the works in not known at this stage (though plaster repairs, localised rebuilding of wall masonry, and repairs to the dressed stonework of the window are possible). The Contractor should allow a provisional sum of £2,500 for such works (and associated scaffolding costs). The final scope and extent of the work is to be agreed on-site with the Structural Engineer and Church Architect.

85.0 WINDOW (NORTH TRANSEPT)

85.1 **South Window – Overhauling Window Opening Vent**
Provisionally allow for easing and overhauling the existing window opening ventilator.
Allow for easing and overhauling the window ventilator, including provision of operating cord(s). Allow for re-decorating in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer. Colour: Black.

86.0 INTERNAL REDECORATIONS (NORTH TRANSEPT)

86.1 **South Window – Redecoration of Window Opening Vent**
See under WINDOW (NORTH TRANSEPT)

86.2 **Roof/Ceiling Timberwork - Touching-In**
Allow for localised touching-in of roof structure / ceiling timberwork.
Allow for work needed where localised discolouration has occurred (due to rainwater ingress). For pricing purposes, assume work to $3m^2$ of timber boarding to the ceiling, and $2m^2$ to the roof structure. Final details to be agreed with the Church Architect on-site.

CHANCEL

87.0 WINDOWS (CHANCEL)

87.1 **North and South Windows – Overhauling Window Opening Ventilators (2no. Total)**
Provisionally allow for easing and overhauling the existing window opening ventilators.
Allow for easing and overhauling the window ventilator, including provision of operating cord(s). Allow for re-decorating in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer. Colour: Black.

87.2 **Provisionally allow for replacing the existing window opening casements.**
Provisionally allow for replacing the existing window opening casements (should they be beyond overhaul and repair). New ventilator to match the existing, and include operating cords, mesh security grilles, etc. Allow for re-decorating in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer. Colour: Black. Allow also for all builder's work, including any associated work to the glazing, etc.

SOUTH AISLE

88.0 WEST WINDOW (SOUTH AISLE)

88.1 **West Window – Provision of Window Opening Vent**
Provisionally allow for the insertion of a traditional window opening ventilator.
Allow for inserting a new traditional hopper window (to improve ventilation of the church interior) to the base of the southern lancet. Allow for fitting metal mesh grille to top opening in order to prevent bird/insect ingress and unauthorised access. Allow for open/closure using pole hook (including provision of pole). Allow for all alterations to glazing to suit (including lead condensate tray). Hopper to be fitted by church glazing specialists. Allow for decorating in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer. Colour: Black.

89.0 OTHER (SOUTH AISLE)

89.1 **Air Brick Adjacent To RWP 13 – Adjustment of Opening**
Provisionally allow for adjusting air brick & opening to prevent rainwater ingress.

89.2 Removing Existing Air Brick - Allow for removing the existing air brick 225x225mm cast iron air brick (the existing air brick is to be retained and passed to the PCC for possible future re-use (ie. it is to be retained as a spare).

89.3 Adjusting Opening – Allow for blocking the bottom half of the opening (in matching stonework).

89.4 New Air Brick – Allow for inserting a new air brick (air brick to match pattern of other used to the South Aisle. Air brick to be the "Y3" Air Brick" (9"x3" – 225mm x 75mm) available from The Cast Iron Air Brick Company, Down Farm, Little Bray Lane, Brayford, Devon, EX32 7QQ. Telephone: (01598) 711999. E-mail: sales@castironairbricks.co.uk. Website: www.castironairbricks.co.uk.

89.5 Lime Mortar - Allow for bedding and pointing-up around air brick, in Lime Mortar #1 (sand aggregates).

89.6 **Electrical Panels to Main Switchgear – Inspection, and Possible Removal of Asbestos**
Allow for inspection for and possible removal of asbestos.
IMPORTANT NOTE: An asbestos survey was undertaken in October 2019 by independent asbestos sur-veyors, Walker and Turpin Consultants. Their report dated 14th October 2019 (see Appendices) indicated that it was not known if the electrical panels have any asbestos containing materials. This is to be checked during the works (Main Contractor's Electrician to liaise with licenced asbestos removal contractor to arrange). Any asbestos containing materials (or material suspected as possibly containing asbestos) are to be removed.

NAVE

90.0 OTHER (NAVE)

90.1 **Nave – Removal of Asbestos From Redundant Boiler in Floor Pit (By South Porch)**
Allow for removing asbestos containing material from the rear of the redundant boiler.
IMPORTANT NOTE: An asbestos survey was undertaken in October 2019 by independent asbestos surveyors, Walker and Turpin Consultants. Their report dated 14th October 2019 (see Appendices) identified the presence of asbestos containing materials (the remnants of an asbestos cement flue) to the rear of the redundant boiler to the floor pit. Allow for asbestos containing materials (and any dust/debris on the floor) to be removed by licenced asbestos removal specialists.

NORTH AISLE

91.0 WINDOW (NORTH AISLE)

91.1 **West Window – Provision of Window Opening Vent**

Provisionally allow for the insertion of a traditional window opening ventilator.

Allow for inserting a new traditional hopper window (to improve ventilation of the church interior) to the base of the northern lancet. Allow for fitting metal mesh grille to top opening in order to prevent bird/insect ingress and unauthorised access. Allow for open/closure using pole hook (including provision of pole). Allow for all alterations to glazing to suit (including lead condensate tray). Hopper to be fitted by church glazing specialists. Allow for decorating in Dulux Metalshield system. Allow for all preparation work, primer and number of coats recommended by the manufacturer. Colour: Black.

COLLECTIONS PAGES

GENERAL

1.0 GENERAL ITEMS

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2.0 SCAFFOLDING

Scaffolding

ROOFS

TOWER ROOF

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4.0 TIMBERWORK (TOWER ROOF)
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SOUTH TRANSEPT ROOF

9.0 DEMOLITIONS, INSPECTION AND REPORTING (SOUTH TRANSEPT ROOF)
10.0 TIMBERWORK (SOUTH TRANSEPT ROOF)
11. STAINLESS-STEEL ROOF COVERING (SOUTH TRANSEPT ROOF)
12. LEADWORK (SOUTH TRANSEPT ROOF)
13. RAINWATER DRAINAGE (SOUTH TRANSEPT ROOF)
14.0 REDECORATIONS (SOUTH TRANSEPT ROOF)

NORTH TRANSEPT ROOF

15.0 DEMOLITIONS, INSPECTION AND REPORTING (NORTH TRANSEPT ROOF)

16.0 TIMBERWORK (NORTH TRANSEPT ROOF)
17.0 STAINLESS-STEEL ROOF COVERING (NORTH TRANSEPT ROOF)
18.0 LEADWORK (NORTH TRANSEPT ROOF)
19.0 RAINWATER DRAINAGE (NORTH TRANSEPT ROOF)
20.0 REDECORATIONS (NORTH TRANSEPT ROOF)

NAVE ROOF (ABUTMENT WITH TOWER)

21.0 MINOR REPAIRS (NAVE ROOF)

SOUTH AISLE ROOF (ABUTMENT WITH SOUTH TRANSEPT)

22.0 MINOR REPAIRS (SOUTH AISLE ROOF)

NORTH AISLE ROOF (ABUTMENT WITH NORTH TRANSEPT)

23.0 MINOR REPAIRS (NORTH AISLE ROOF)

CHANCEL ROOF (ABUTMENT WITH TOWER)

24.0 MINOR REPAIRS (CHANCEL ROOF)

EXTERNAL WALLS

TOWER (PARAPET WALLS) – ALL FOUR ELEVATIONS

25.0 MASONRY REPAIRS (TOWER PARAPET WALLS)
26.0 LEADWORK (TOWER PARAPET WALLS)
27.0 OTHER (TOWER PARAPET WALLS)

TOWER (LOWER/MID-STAGE) – ALL FOUR ELEVATIONS

28.0 MASONRY REPAIRS (TOWER LOWER/MID-STAGE)
29.0 LEADWORK (TOWER LOWER/MID-STAGE)
30.0 WINDOWS (TOWER LOWER/MID-STAGE)
31.0 DECORATIONS (TOWER LOWER/MID-STAGE)
32.0 RAINWATER GOODS (TOWER LOWER/MID-STAGE)
33.0 OTHER (TOWER LOWER/MID-STAGE)

SOUTH TRANSEPT (PARAPET WALLS)

34.0 MASONRY REPAIRS (SOUTH TRANSEPT PARAPET WALLS)
35.0 LEADWORK (SOUTH TRANSEPT PARAPET WALLS)
36.0 OTHER (SOUTH TRANSEPT PARAPET WALLS)

37.0 SOUTH TRANSEPT (MAIN ELEVATIONS)

38.0 MASONRY REPAIRS (SOUTH TRANSEPT MAIN ELEVATIONS)
39.0 WINDOWS (SOUTH TRANSEPT MAIN ELEVATIONS)
40.0 RAINWATER GOODS (SOUTH TRANSEPT MAIN ELEVATIONS)
41.0 DECORATIONS (SOUTH TRANSEPT MAIN ELEVATIONS)
42.0 OTHER (SOUTH TRANSEPT MAIN ELEVATIONS)

NORTH TRANSEPT (PARAPET WALLS)

43.0 MASONRY REPAIRS (NORTH TRANSEPT PARAPET WALLS)
44.0 LEADWORK (NORTH TRANSEPT PARAPET WALLS)

NORTH TRANSEPT (MAIN ELEVATIONS)

45.0 MASONRY REPAIRS (NORTH TRANSEPT MAIN ELEVATIONS)
46.0 WINDOWS (NORTH TRANSEPT MAIN ELEVATIONS)
47.0 RAINWATER GOODS (NORTH TRANSEPT MAIN ELEVATIONS)
48.0 DECORATIONS (NORTH TRANSEPT MAIN ELEVATIONS)

NAVE NORTH CLERESTORY

49.0 MASONRY REPAIRS (NAVE NORTH CLERESTORY)
50.0 RAINWATER GOODS (NAVE NORTH CLERESTORY)
51.0 DECORATIONS (NAVE NORTH CLERESTORY)

NORTH AISLE (WEST ELEVATION)

52.0 MASONRY REPAIRS (NORTH AISLE WEST ELEVATION)
53.0 DECORATIONS (NORTH AISLE WEST ELEVATION)

CHANCEL (EAST ELEVATION/GABLE)

54.0 MASONRY REPAIRS (CHANCEL EAST ELEVATION/GABLE)

CHANCEL (SOUTH ELEVATION)

55.0 LEADWORK (CHANCEL SOUTH ELEVATION)

SOUTH AISLE

55.0 MASONRY REPAIRS (SOUTH PORCH)
56.0 DECORATIONS (SOUTH PORCH)

DRAINAGE

REMEDIAL WORKS - SUMMARY OF APPROACH

58.0 DRAINAGE APRON AND ADJUSTMENTS TO EXTERNAL GROUND
59.0 OPEN GULLIES
60.0 DRAINAGE PIPEWORK
61.0 SOAKAWAYS

INTERIOR ACCOMMODATION

TOWER BELFRY (UPPER AND LOWER LEVELS)

62.0 MASONRY REPAIRS (TOWER BELFRY)
63.0 INTERNAL REDECORATIONS (TOWER BELFRY)
64.0 ACCESS IMPROVEMENTS (TOWER BELFRY)
65.0 WINDOWS / OPENING (TOWER BELFRY)
66.0 ELECTRICAL INSTALLATION (TOWER BELFRY)
67.0 OTHER (TOWER BELFRY)

TOWER SOUND DEADENING CHAMBER

68.0 MASONRY REPAIRS (TOWER SOUND DEADENING CHAMBER)
69.0 INTERNAL REDECORATIONS (TOWER SOUND DEADENING CHAMBER)
70.0 ACCESS IMPROVEMENTS (TOWER SOUND DEADENING CHAMBER)
71.0 ELECTRICAL INSTALLATION (TOWER SOUND DEADENING CHAMBER)
72.0 OTHER (TOWER SOUND DEADENING CHAMBER)

TOWER STAIR PASSAGE

73.0 MASONRY REPAIRS (TOWER STAIR PASSAGE)
74.0 ACCESS IMPROVEMENTS (TOWER STAIR PASSAGE)
75.0 INTERNAL REDECORATIONS (TOWER STAIR PASSAGE)
76.0 WINDOWS/DOOR (TOWER STAIR PASSAGE)
77.0 ELECTRICAL INSTALLATION (TOWER STAIR PASSAGE)
78.0 OTHER (TOWER STAIR PASSAGE)

SOUTH TRANSEPT

79.0 MASONRY REPAIRS (SOUTH TRANSEPT)
80.0 INTERNAL REDECORATIONS (SOUTH TRANSEPT)
81.0 WINDOWS / OPENINGS (SOUTH TRANSEPT)
82.0 ELECTRICAL INSTALLATION (SOUTH TRANSEPT)

83.0 OTHER (SOUTH TRANSEPT)

NORTH TRANSEPT

84.0 MASONRY REPAIRS (NORTH TRANSEPT)
85.0 WINDOW (NORTH TRANSEPT)
86.0 INTERNAL REDECORATIONS (NORTH TRANSEPT)

CHANCEL

87.0 WINDOWS (CHANCEL)

SOUTH AISLE

88.0 WINDOW (SOUTH AISLE)
89.0 OTHER (SOUTH AISLE)

NAVE

90.0 OTHER (NAVE)

NORTH AISLE

91.0 WINDOW (NORTH AISLE)

SUB-TOTAL

VAT

TOTAL (INCLUDING VAT)