

SPECIFICATION & SCHEDULE OF WORKS

for the **North Aisle Reordering & Reduction of Pews**

to

**CHURCH of ST. MARY,
HEMEL HEMPSTEAD**

HERTFORDSHIRE



Michael Dales Partnership Limited

65, Hermitage Road, HITCHIN, Hertfordshire SG5 1DB



SPECIFICATION For WORKS TO BE DONE AND MATERIALS TO BE USED

in connection with the
North aisle reordering and reduction of pews
to
St. Mary's Church,
Hemel Hempstead,
Hertfordshire

January 2024
February 2024 - Rev A
February 2024 - Rev B

1 PRELIMINARIES

- 1.1 The Employer is St. Mary's PCC
- 1.2 The Architect is Michael Dales Partnership Limited.
65 Hermitage Road, Hitchin, Hertfordshire. SG5 1DB
Telephone Number (01462) 230803.
- 1.3 The works will be inspected by and are to be carried out to the satisfaction of the Architect.

The works to be carried out are shown and described in this specification and the Architect's drawings numbered: 1794/5-001, 1794/5-002E, 1794/5-006D, 1794/5-007B and 1794/5-008.

Works comprise the removal of the pews and pew decks within the North aisle and east end of the Nave, and installation of level timber floors to these areas; the replacement of existing heating pipes along the North aisle wall with radiators, and other associated internal works.

The Contractor is advised to visit the site prior to the submission of their Tender to inspect the building, the means of access and the site conditions and the scope of the works as described or can be reasonably inferred. No claims for extras will be accepted arising from the contractor's failure to do so.

The Contractor will be required to ensure that all activities related to this building contract are strictly confined within the boundaries of the site and the area identified within the site.

Externally the Contractor is to make a compound using security fencing to protect the public from the works and the works from the public.

The church will remain in use during the works. The contractor shall make all necessary provision for safe access and egress from the building at all times

The Contractor shall ensure that the security of the works is maintained at all times during the works.

The Contractor shall allow in their tender for any inconvenience, uneconomic working. The Contractor should allow for shorter working days in relation to hot work and to setting times in relation to lime mortar and lime-wash.

- 1.4 The form of Contract under which the works are to be executed will be the JCT Minor Works Building Contract 2016.

Tenders are to remain open for acceptance for a period of not less than 90 days from the date fixed for the submission of tenders.

- 1.5 The following are the Clause numbers and headings of the Conditions of the Contract and the Contractor is to allow in their Tender for observing the full text of each Condition.

4th Recital & Schedule 2	Tender date shall be base date
4th Recital & Clause 4.2	Employer is not a contractor
5th Recital	CDM regulations The architect will be appointed Principal Designer
6th Recital	Framework Agreement is not applicable.
7th Recital & Schedule 3	Collaborative working applies. Health and safety shall apply. Cost savings and value improvement shall apply. Sustainable development and environmental considerations shall apply. Performance indicators shall not apply. Notification of disputes applies. Employer and Contractor to complete to show their respective nominees
Article 7	Article 7 and Schedule 1 shall apply.
Clause 1.1	CDM planning period shall commence 14 days prior to work commencing.
Clause 2.2	Will be completed to indicate that the works will be commenced and shall be completed by the dates shown on the Form of Tender.
Clause 2.8	Will be completed to show the sum of £300.00 per week.

Clause 2.10	Will be completed to show a rectification period of 12 months
Clause 4.3	Will be completed to show 95%.
Clause 4.4	Will be completed to show 97.5%.
Clause 4.8.1	Shall be completed to show 3 months.
Clause 4.11 & Schedule 2	Shall be deleted (Fluctuations Option does not apply) Percentage addition shall be completed to show Nil.
Clause 5.3.2	Shall be completed to show that the contractor shall indemnify the Employer in the sum of not less than £10,000,000.00.
Clause 5.4A	Shall be deleted
Clause 5.4B	Shall apply
Clause 5.4C	Shall be deleted
Clause 5.4A.1 & 5.4B.1.2	Shall be completed to show 15%
Clause 7.2	Adjudicator or arbitrator shall be appointed by RIBA

The date of practical completion will be the date certified under clause 2.9

- 1.6 The Employer, Contractor and any Sub-Contractor shall produce evidence to the Architect to show that the insurances referred to in the contract have been taken out and are in force at all material times.

All existing structures, contents, also the works and unfixed materials and goods (except Contractor's sheds, plant, tools and equipment) shall be at the sole risk of the Employer as to the loss or damage by the perils listed in the Contract. The Employer shall maintain insurance against those risks, including any necessary demolition and removal of any debris, for the full reinstatement value concerned plus 15% for fees.

The Contractor must Indemnify the Employer against all liabilities, loss, claim, expense or proceedings whatsoever, in respect of damage to the Church arising out of the negligent use of blow lamps, lead burning torches, welding equipment and any other apparatus. The Contractor must also cause any sub-Contractor to maintain insurance against all liability of the aforesaid risks.

- 1.08 Tendering Procedure: Competitive tenders will be invited based upon the detailed drawings and this Specification. When considering the tenders submitted the Employer will take into account the dates quoted for commencement and completion of the works in addition to the tender sum.

The Employer does not bind themselves to accept the lowest or any Tender. No remuneration will be paid for the preparation of Tenders.

1.09 Programme. The contractor's suggested programme for the works is to be submitted with his tender and will be taken into account by the Employer when considering which tender to accept. The subsequently agreed programme will form part of the contract documents.

During the course of the Works the programme shall be regularly marked up to show the actual progress of works for inspection by the Architect.

Similarly, within fourteen days after the signing of the Contract the Contractor shall submit to the Architect a priced copy of this Specification with each item priced to show the cost of the work described. This priced copy of the Specification will not be treated as a Bill of Quantities and will be used only for assessing the value of work in progress and the cost of any variations.

Two copies of any drawings (not counting any certified copy of the contract drawings) will be issued to the Contractor free of charge. Extra copies will be issued on request, but will be charged to the Contractor.

1.10 Do not scale from the drawings. All dimensions should be checked on site or with the Architect. Any significant discrepancies should be notified to the Architect.

1.11 The Contractor is required to present his Application for Payment in the following manner:

Spec Item	Detail	Cost in Priced Spec.	% complete	Valuation
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1.12 The Contractor will be required to provide proper on-site supervision of the Works throughout the whole period of the Contract by the employment of a Site Foreman, (or other suitable person). The Foreman shall not be removed from the site or replaced without the written consent of the Architect.

The Architect will make frequent inspections of the work in progress. The Contractor is to notify the Architect if he is to be off-site.

1.13 The words "supply", "provide", or "provide and fix", in this Specification are to be taken to assume that the Contractor will include all the labour and materials required to complete the operation described.

The word "approved" is to be taken to mean approved by the Architect.

1.14 The Contractor is to provide everything necessary in the way of materials, tools, plant and labour for the proper and complete execution of the Works involved in the Contract according to the **intent and meaning of the drawings and this Specification providing that this can be reasonably inferred from either.**

The absence of a description of work or materials or fittings or an Estimated Cost in the priced copy of this Specification submitted by the Contractor in compliance with Clause 1.08 shall not vitiate the requirements of this Clause.

1.15 The quality of materials and products to be used for the works shall not be less than described in the appropriate British or European Standard Specification.

Where work is shown or described to be in accordance with a Code of Practice the Contractor shall ensure that the recommendations of the Code of Practice are complied with in all respects.

Workmanship shall in all cases be in accordance with the best methods recognised throughout the trade.

No contractor or sub-contractor shall sublet work of a specialist or qualification led nature without the consent of the architect.

- 1.16 Materials and work likely to deteriorate if left exposed must be kept undercover and/or protected.

Similarly, the Contractor shall protect completed works to prevent damage by following trades.

- 1.17 The Contractor shall accept delivery of all materials to the site and shall ensure that they are of the quality and quantity specified, in proper condition at the time of delivery and properly stored until fixed.

- 1.18 Where appropriate the Contractor shall be responsible for serving the Notices on the Local Authority when work on site is commenced and at the appropriate times as the Works proceed and upon completion. Where appropriate the Contractor will be required to obtain a Notice of Satisfactory Completion of the Works from the Local Authority. Where appropriate the Contractor shall also be responsible for the service of any other Statutory Notices required as a result of him carrying out the Works. The Contractor shall pay all charges due in respect of same.

- 1.19 The Contractor may make use of the Employer's power and water supplies.

- 1.20 The Contractor shall attend upon, cut away for and make good after all trades and domestic and Nominated Sub-Contractors.

- 1.21 The Contractor may make use of the church W/C and facilities for welfare provisions, provided they are maintained in a clean and tidy condition at all times.

- 1.22 Upon completion of the Works the Contractor shall leave the whole of the Works clean and in proper condition. The Contractor shall clear away all temporary buildings and re-instate any area of the site affected by same.

- 1.23 The Contractor shall be responsible for checking any dimensions on the site and shall advise the Architect of any discrepancies found.

- 1.24 Include the sum of 10% of the total cost of Prelims and Schedule of work for Contingencies to be used in whole or in part as directed by the Architect. The whole or any part of the Contingency sum not so used shall be deducted at the settlement of the Account.**

- 1.25 HEALTH AND SAFETY

The Contractor shall ensure that he, his employees, sub-contractors and visitors to the site at all times observe the relative standards and codes of practice for health and safety where building work is carried out.

In particular where work is carried out on scaffolding at high level industrial safety helmets to BS5240 are to be worn, masks are worn where dust is being created and ear defenders where noise is generated.

All visitors to the site are to be provided with safety helmets should they require them.

The Contractor shall allow for observing the full implications of the Employers health and safety policy together with current requirements for CDM Regulations. The Contractor shall note that all CDM documentation must be completed before the issue of a Final Certificate.

1.26 FIRE PRECAUTIONS

Take all necessary precaution to prevent nuisance to public on and off site from smoke, dust, rubbish and other causes.

The contractors shall provide and maintain on site appropriate fire extinguishers for the duration of the works.

1.27 The Contractor is to take all reasonable measures to prevent loss or damage by fire. All workmen should be shown the location of fire extinguishers and are to be told where telephones can be found in the event of an emergency. Where work involving the use of blow-lamps, lead burning torches or any other flame producing apparatus it should be carried out under close supervision. 2 No. 2 gallon water type extinguishers should be kept in close proximity to the apparatus. All parts of the Church fabric where a heating process has been carried out must be given a final inspection two or three hours after work has ceased for the day. The Contractor should make due allowance within their tender for shortened working days where this applies.

1.28 Smoking is strictly prohibited on the site.

1.29 The playing of radios during the working day will not be permitted except with the express permission of the Employers representative. The Contractor, his sub-Contractors and operatives should bear in mind the purpose of the building and behave in an appropriate manner at all times.

1.30 Any electrical contractor shall have **N.I.C.E.I.C Approved Contractor Status**. Any temporary electrical wiring should comply with N.I.C.E.I.C. Regulations and should be disconnected at the end of each working day. All waste material should be removed from the site at the earliest opportunity. Where any fittings are specified and they arrive in packaging the packaging should be removed outside the Church and disposed of. No bonfires or disposal of packaging or waste material should be carried out on site.

1.31 The storage of inflammable materials shall be outside the Church and well away from the building.

INSURANCE:

Dependent upon the type and extent of the 'hot work' it may be prudent to notify Insurers of the work and seek their approval of safety precautions put in place.

PROTECTION

Every effort is to be made to prevent damage to existing building fabric, fences, walls, gates, paving, trees and shrubs and other features which are to remain in position during the execution of the works.

The Contractor shall provide and fix all and any necessary temporary casings, boards, sheets etc. to ensure this.

The Contractor, sub-Contractors and all operatives must bear in mind that the Church will remain in use during the works and that the programme of works must be agreed with the church administrator who will acquaint the Foreman with any need to stop work during a service or burial.

The Contractor shall make due allowance within their tender for the inconvenience caused by stoppages in work to accommodate services etc.

The contractor shall take adequate measures to ensure that rainwater gutters, hoppers, downpipes and drains are not blocked or choked as a result of the works. Where appropriate the contractor shall take such measures as necessary for diverting rainwater temporarily for the protection of the building and its contents.

1.32 AUTHORITY

All works have been approved by the Diocesan Advisory Board and have received a Faculty prior to work commencing on site. Where special or urgent circumstances occur the contractor shall advise the architect who will enquire whether a licence may be required to proceed.

Where day work is carried out, each time-sheet and invoice is to be signed by the Foreman as correct and is to refer to the Architect's Instruction for the work. Day works only to be carried out with authority of architect.

Completed day-work sheets will only be considered for acceptance if submitted within ten working days.

All additional works or variations shall be valued at rates comparable with those used in the tender process.

Where work is to be carried out and is to be concealed a minimum of 24 hours' notice is to be given to the Architect in order that an opportunity for an inspection may occur.

1.33 THE WILDLIFE AND COUNTRYSIDE ACT 1981 AND CONSERVATION (NATURAL HABITATS ETC) REGULATIONS 1994

This Act gives very full protection to bats because of their special requirements for roosting. It is illegal not only to intentionally kill, injure or handle any bat, but also intentionally damage or destroy or obstruct access to any place that a bat uses for shelter or to disturb a bat whilst it is occupying such a place. In this context "damage" means make worse for a bat and so includes such operations as chemical treatment of timbers. The Act provides defences so that building, maintenance or remedial operations can be carried out in places used by bats.

It is important that all contractors and subcontractors under this specification and contract notify the Bats Conservation Trust. Their Contact details are 0845 1300 228 email enquiries@bats.org.uk so they can decide if the building is inhabited by bats. Failure to comply with this Act could render the Contractor liable for heavy fines.

No work is to proceed without written confirmation from the Architect.

NOTE: No organochlorine woodworm killers are to be used where bats are in evidence. Synthetic pyrethroid insecticides such as permethrin and cypermethrin can be permitted if used by an approved timber treatment.

GENERAL PROCEDURES

- 1.34 The Contractor, sub-Contractors and all operatives must bear in mind that the Church will remain in use during the works and that the programme of works must be agreed with the church administrator who will acquaint the Foreman with any need to stop work during a service or burial.

The Contractor shall make due allowance within their tender for the inconvenience caused by stoppages in work to accommodate services etc.

- 1.35 Where materials and work are not fully specified they are to be carried out using materials fit for the purpose, in line with current standards and where ever possible match existing materials in type, texture, colour, size and quality and overall appearance.
- 1.36 Tenders are to remain open for acceptance for a period of not less than 90 days from the date fixed for the submission of tenders.

2 TRADE PRELIMINARIES AND PREAMBLES

2.1.0 EXCAVATOR AND CONCRETOR

- 2.1.1 Excavations to be kept dry at all times.

- 2.1.2 No excavated material is to be removed from the site without the consent of the Architect. Topsoil and other suitable material is to be retained for backfill. Redundant material is to be carted to a position to be determined by the Architect.

- 2.1.3 Generally concrete mixes are to be as follows unless specified by Structural Engineer:

Grade:	Maximum Size Aggregate	Minimum Cement Content	Minimum Cube strength	
			----- at 7 days	at 28 days
10	20mm	140 Kg/m ³	6.7 N/mm ²	10.0 N/mm ²
21	20mm	280 Kg/m ³	14.0 N/mm ²	21.0 N/mm ²

Grade 10 concrete shall only be used for blinding and filling and for drainage work as specified. Grade 21 concrete shall be used for any reinforced concrete work and for all foundations and floor slabs.

Concrete shall be mixed in a pan or drum type mixer.

Concrete shall be placed in its final position within 30 minutes of the addition of water to the mix.

Cement in concrete to be placed above ground shall be ordinary British Portland Cement to BS 12.

Cement in concrete to be placed below ground shall be sulphate resisting to BS 401.

Aggregates are to comply with BS 882 and 1201.

Water shall be clean and free from acids, vegetable and deleterious matter.

Admixes and/or additives shall not be used without the approval of the Architect.

Colouring additives may not be used without approval of the Architect.

Test cubes shall be taken and tested at the expense of the Contractor, in accordance with the requirements of

BS 1881. The results of the tests shall be passed to the Architect for information and record purposes.

2.1.4 Where additional depth of excavation has to be carried out to achieve a good bottom the excavations shall be backfilled with grade 10 concrete up to the level of the designed foundations.

2.1.5 Where concrete is required within the church it shall be limecrete formed using limestone chippings and coarse sand with NHL5 in mix 3:1 or as supplied from a manufacturer approved by the architect.

2.2.0 DRAINLAYER - none proposed.

2.3.0 BRICKLAYER & STONEMASON

Common bricks shall be sound, well burnt Flettons from an approved manufacturer to comply with BS 3921. Common bricks to be rendered externally are to be keyed.

The mortar mix for new sleeper brick walls is to be NHL 3.5 lime, sand in the proportions 1.3.

All joints of brickwork are to be well flushed up and every horizontal and every vertical joint must be grouted up solid.

Samples of bricks for replacements to be provided to Architect in advance of works commencing on site. For tender purposes assume new bricks are to be Bulmer Imperials to match existing in size, tone and texture.

2.4.0 STONWORK:

2.4.1 Mortar mixes - stonework:

The mortar for all general walling shall generally be assumed for tender purposes to be one part NHL2, one part CL70 Calcium Lime (to BS EN 459-1), 2 parts graded selected sharp sand.

Hydraulic Lime to be St. Astier or Otterbein NHL.

The sand shall be local clean sharp pit sand, typically with low clay content (<2%) and particle size between 4mm & 150microns. The contractor shall source three local sands from which a suitable mix shall be selected. Types, source and mix to be agreed with the Architect before full work commences.

All stone is to be thoroughly wetted before jointing takes place.

Dense and impervious mortar is to be avoided.

A coarse texture of joints is required and this should be obtained by stippling the surface of the mortar before it finally sets with a stiff brush or scraping with a trowel, to show up the grit in the mix. The surface of the wall must be kept clean as the work proceeds. On no account should ribbon pointing be used.

Precautions must be taken to prevent rapid evaporation and the development of a milky white colour. Spraying down fresh pointing the day after it has been placed will allow the mortar to take in some water which helps to prevent rapid evaporation. This may be reapplied two-three times per day in hot weather. All new work to be covered with hessian for at least one week to protect from weather and allow the mortar to harden at an appropriate rate.

No mortar should be mixed or used when the temperature is below 4°C. Pointing shall only be carried out on a rising temperature. All new work is to be adequately protected from damage by frost up to practical completion.

A lime putty mortar is to be used for re-pointing and jointing in ashlar work and to Stone flooring. The lime putty is to be purchased from an approved source of supply. The lime putty is mixed with stone dust or sand in the proportion 3:1 (stone dust:lime). The type of stone dust or sand is to be agreed with the Architect before work commences.

The lime putty can be obtained ready for use from:

1) Anglia Lime Company: PO Box 6, Sudbury Suffolk CO10 6TW
Tel: 01787 313974
email: info@anglialime.com

2) Bleaklow Industries Ltd, Hassop Avenue, Hassop, Bakewell, Derby, DE45 1NS.
Tel: 01246 582284
email: rob@harpley.fsnet.co.uk

3) Hirst Conservation Materials Ltd, Laughton, Sleaford, Lincs, NG34 0HE. Tel: 01529 497517.

Or any other approved quality source.

2.4.2 MORTAR ANALYSIS - none proposed

2.4.3 JOINTING

New mortar joints are to match the thickness of the existing as far as possible. Where new joints are formed in random or rubble walling the new joints are to reflect the overall appearance of the existing walling.

2.4.4 RE-POINTING - none proposed

2.4.5 MORTAR AND POINTING SAMPLES - none proposed

2.4.6 TIES AND CRAMPS - none proposed

2.4.7 GROUTING - none proposed

2.5.0 CARPENTER AND JOINER

2.5.1 Where softwood is specified for carpentry it is to be GS or MGS Swedish 5ths or 1st or 2nd common Hemlocks to BS 4978.

2.5.2 Where softwood is specified for joinery it is to be unsorted quality Swedish Redwood. Where softwood joinery is to receive a stain or clear finish the timber shall be selected for clear faces and shall be kept clean and free from marks until treated.

2.5.3 Hardwood joinery is to be European Oak from sustainable source and with a certified chain of custody.

2.5.4 Plywood is to be BS 1455 with grade 2 veneers and WBP bonding.

2.5.5 Timber described as "Tanalised" is to be vacuum/pressure impregnated with Tanalith 'C' preservative carried out strictly in accordance with the Code of Practice No.2 issued by Hicksons Timber Impregnation Company (GB) Limited. Timber must be machined to its final dimensions before treatment.

2.5.6 Timber stored on site is to be stacked to allow free circulation of air around the timbers and is to be kept clear of the ground and protected from the weather.

2.5.7 Where standard joinery is specified it is to be obtained from specialist manufacturer approved by the Architect.

2.6.0 TIMBER REPAIRS

2.6.1 The contractor is to draw the attention of the architect to any areas of timber decay at the earliest opportunity and as soon as it is discovered. All repairs to historic timbers or work of a fine architectural or furnishing nature are to be agreed with the architect in advance of any work being carried out. Any repairs to historic timbers are to be carried out in accord with the advice given in the English Heritage Vol 5 repair of Glass and timber.

2.7.0 ROOFER -TILES - none proposed

2.8.0 ROOFER - FLAT - none proposed

2.9.0 ROOFER - LEAD - none proposed

Except where otherwise agreed, any lead-work is to be carried out by a registered plumber.

2.9.1 LEAD BURNING - none proposed.

2.9.2 LEADWORK, ROOFING AND GUTTERS - none proposed

2.10 PLUMBER AND HOT WATER ENGINEER

- 2.10.1 The heating installation is to be carried out in accordance with the Bye-Laws and Regulations of the Local Authority and the Water Authority to the satisfaction of the Architect.
- 2.10.2 Sanitary goods are to be fixed strictly in accordance with the manufacturer's recommendations.
- 2.10.3 Where work specified is not in accordance with regulations or best practice, the Architect is to be notified prior to commencement.
- 2.10.4 Pipe insulation is to be fitted to all enclosed internal pipework and is to be 30mm thick Kingspan FM insulation (or min 20mm if required where new pipes join existing pipe runs) with all junctions taped and installed in accordance with manufacturers recommendations.

2.11 PLASTERER

2.11.1 Plaster mix - lime based masonry walls:

Standard 'off the shelf' lime putty basecoat renders are available from suppliers such as Rose of Jericho and may be used. All products are to be stored and utilised in strict accordance with specialist suppliers recommendations.

Where mixing and gauging on site from putty, basecoats are to be mixed to 1 part mature chalk lime putty to 2 parts sharp sand. Site fibre reinforcement is to be added to basecoats at a rate equivalent to 2.5 kg/tonne consisting of fibres and sisal, with no animal hair so there is no issue associated with deterioration of reinforcement.

Lime putty renders stiffen during storage, but can be plasticised by thorough re-mixing normally without the addition of water. Pozzolan gauged render cannot be remixed.

Plaster Application:

Cut back adjacent old plaster to a firm surface and an undercut edge. Dub out and build up in minimum two successive basecoats (coarse stuff) of no more than 10mm thickness.

Top coat (Setting stuff) to be 3 parts lime putty and 2 parts fine washed sand finished with a wooden float to match adjacent surfaces.

Allow for rounding in at edges to ensure finished render is 2mm behind adjacent copings or quoins.

It is very important that tradesmen with experience of the successful use of lime putty renders are employed, as they do not perform as hydraulic lime or cement based materials. Although there is a weak hydraulic reaction if a pozzolan is added, the primary setting mechanism is the reaction with atmospheric CO₂ in the presence of moisture. This 'carbonation' is slow, and control of the drying and curing process by mist-spraying, 'tending' and protecting is crucial to success and long-term performance. Protections are essential. Do not use below a temperature of 5°C or above 25°C. Do not use if there is risk of frost.

2.12 ELECTRICIAN

- 2.12.1 Electricity is available on site for the contractor to use. The contractor shall make the necessary arrangements with the church administrator regarding access.

The contractor should satisfy themselves as to the adequacy of any supply. The contractor shall provide for any cables, lights, transformers etc. All temporary wiring shall comply with requirements of NICEIC. No interference with any existing installation shall be permitted. All circuits are to be disconnected at the end of each working day unless retained for security purposes only.

2.12.2 Any electrical installation or alterations are to be carried out by a specialist Sub-Contractor who has **NICEIC Approved Contractor status**.

2.12.3 The whole of any installation/alterations is to comply with N.I.C.E.I.C. recommendations, the requirements of the Council for the Care of Churches and is to be earthed to satisfy the requirements of the Electricity Board. No wiring of any sort is to be installed in the cavities of the external walls.

Where wiring is specified to be behind wall plaster it is to be protected with PVC conduit properly chased into brickwork or blockwork and fixed in position.

Where wiring is specified to be located in the thickness of structural timber work, the timber members are to be drilled along the line of the neutral axis to allow for the passage of wiring.

Where cabling is to be surface mounted, the Architect is to be consulted on the opportunities for using coloured sheathing to reduce impact.

All cables shall be neatly run in straight and parallel runs wherever possible.

2.12.4 Upon completion the Contractor will be required to test the whole of any electrical installation, (including the earthing of same) and to provide certificates to show that the whole system is satisfactory.

2.12.5 Allow for paying any electrical costs due in respect of this Contract.

2.12.6 Where any work specified or existing work is not in accordance with electrical regulations or best practice, the Architect is to be notified before commencement.

2.13 GLAZIER

2.13.1 STAINED AND LEADED GLASS

All repairs to stained or painted or coloured glass, or where the lead work is of unusual or fine design, is to be carried by a specialist contractor who holds a recognised accreditation in the repair of stained glass and whose appointment shall be subject approved by the architect.

The contractor shall make and fix plywood or similar robust protective boards over all glazed areas in the area of the works to protect historic and important glass from accidental damage during the works. Wherever practical, glass shall be protected before or after scaffold is erected or dismantled.

2.14 PAINTER AND DECORATOR

2.14.1 All paints used for the works are to be obtained from an approved manufacturer and are to be used strictly in accordance with the manufacturer's recommendations. To lime based walls, paint shall be two coats of Classidur ModernPlus2 AF (formerly Classidur Tradition)/Zinsser Grade 1 tinted as required, or lime wash (as directed).

2.14.2 No painting shall be carried out in wet, damp, foggy or frosty weather conditions or on any damp surfaces.

2.14.3 All surfaces to be painted are to be properly prepared, including cleaning down, removing nibs and filling holes in plasterwork, filling all holes and rubbing down timber to a smooth and even surface. Finishing coats are to be well brushed out.

2.14.4 Colours will be selected by the Architect from the BS 4800 and/or RAL colour ranges.

2.14.5 LIMEWASH MATERIALS:

- a) PREPARED CENOSPHERE (PFA) LIMEWASH from:
Pozament Ltd, Swains Industrial Estate, Park Road, Overseal, Burton on Trent.
Tel: 01283 211235/213636
- b) LIME - TALLOW LIMEWASH from:
George Collins & Sons Ltd, Kennett, Newmarket, Suffolk. Tel: 01638 750264

2.14.6 METHOD OF APPLICATION FOR LIMEWASH

Limewash application to lime putty based walls should be of limewash with casein binder and utilised within manufacturer's prescribed shelf-life.

a) GENERAL

Generally, limewash should be applied thinly and be allowed to dry out slowly.

Casein Limewash must be thoroughly mixed, preferably with a mechanical whisk, to ensure even distribution of pigments and ingredients immediately before and during use as it readily settles out.

Casein limewash must not be applied to sunlit surfaces, and application must be delayed until the wall is in the shade.

Each coat must be protected from drying too quickly by regular mist-spraying. It is normal to mist-spray the previous coat prior to the application of the next coat.

Newly applied Limewash must be fully protected from rain, wind, direct sunlight, frost etc until it has cured and carbonated (normally about 4 weeks)

b) DAMPING DOWN

This is very important for a good finish. Taking an area of about 4 sq. yds. at a time, spray the wall surface with water so that the water in the limewash will not be sucked out immediately it is applied. Old limewash, lime plaster, etc. will need more damping down than hard stones.

c) APPLYING THE LIMEWASH: FIRST COAT

Brush the limewash using a grass brush onto the dampened area, working it well into any cracks and joints, but not allowing it to build up too thickly at any point or it will craze on

drying out. The limewash will be transparent on application, so care is needed for even coverage. Move to the next area, damping as you go.

d) SUBSEQUENT COATS

Allow the previous coat to dry out completely (at least 24 hours, often longer). Lightly damp down the previous coat before applying the next. Five coats at least should be applied in all. After the initial drying out, limewash will continue to harden and strengthen for several weeks.

2.14.7 PEWS

All new/newly exposed joinery to pews, pew fronts etc. is to be finished with a min 2 no. coats of Osmo Natural Oil Woodstain (satin finish), applied strictly in accordance with the manufacturer's instructions. The contractor should allow for supplying 3 no. finished colour samples to be produced for colour selection by the Architect to match the existing pews before proceeding.

2.15 TEMPORARY SERVICES

2.15.1 SCAFFOLDING - not anticipated to be required

2.16 PROTECTION

Provide temporary fences, hoardings, screens, planked foot ways, guard rails as may be necessary for protecting the public, users of the building, and statutory bodies and to enable the satisfactory completion of the works.

Provide all necessary temporary protection to all parts of the building from damage by inclement weather or the building works.

In order to avoid delays due to cold weather the Contractor is to take the following precautions:

- a) Protect stone from rain and frost by stacking clear of ground and completely covering with waterproof sheet.
- b) Store cement and lime in on raised dry platform.
- c) Do not use frozen materials
- d) Chemical accelerators, retardants or anti-freeze additives are not to be used.
- e) Keep finished work covered for at least three days after completion.

2.17 ORGAN PROTECTION

Note: the church will continue to be used through-out the duration of the works, and use of the organ will be required at times whilst the work is in progress. The contractor is to allow for providing and installing dustsheets (clear polythene) to cover whole of the arched opening between the East end of the North Aisle and North transept, and the arched opening between the North transept and Tower Crossing to protect the organ in the Church from being affected by dust or debris as a result of building works, for the duration of the works. Dust sheets are to be fixed to s/w battens to the respective ceilings.

The Contractor is to Indemnify the Church against any loss or damage in connection with the organ as a result of failing to provide and maintain the protection specified above.

2.18 STAINED GLASS and LEADED LIGHTS

All leaded windows in the area of the works shall be protected against accidental damage by means of rigid boards.

2.19 ACCOMMODATION

The Contractor may use the church toilet and kitchenette facilities, provided they are kept clean and tidy at all times.

2.20 WATER AND ELECTRICITY

The Contractor may use the Employer's water and electricity subject to agreement on connections with Church Warden, Vicar and Architect.

2.21 CLEANING

Where any works have affected the interior of the church the contractor shall carry out a thorough clean of the area or areas affected to return them to a level of cleanliness comparable with the remainder of the building.

Where works have been carried out externally the contractor shall clean the area and reinstate any areas of hard or soft landscaping to a condition comparable with their original state.

2.22 ARCHAEOLOGIST

NOTE: The Employer shall appoint an archaeologist to attend during the excavation work. The archaeologist will have authority to suspend, slow or halt the work if they wish to examine or record the contents of excavations or control the way in which the excavation proceeds. The contractor will need to accommodate any delays which may occur due to the archaeologist suspending the work. Should this occur, the contractor/their groundworker will need to record the rate of progress (e.g. with photographs) and inform the architect of any instructions received from the archaeologist as soon as this occurs. This is to ensure that any claims for additional costs resulting from the archaeologist suspending the works may be fairly assessed by the architect against the contractor's programme. Claims for additional costs resulting from archaeological delays will not be certified in the absence of adequate records.

The contractor/their groundworker should allow for a slower rate of excavation due to the archaeologist's oversight and attendance than would otherwise be expected on a non-archaeologically sensitive site.

The archaeologist will be required to submit post examination reports on the works.

3.1 GENERAL REQUIREMENTS

- 3.1.1 Supply and fix all necessary protection measures and sheeting etc. to protect the building fabric, furnishings and organ from dust, dirt and damage during the carrying out of the works. Refer to clause no. 2.17 for organ protection requirements.

Allow for liaising with the Employer to ensure that the organ is adequately protected from dust for the duration of the work.

Provide and maintain all guarding and protection measures for the duration of the work, and until after cleaning has been completed.

- 3.1.2 Allow for providing and fixing dust sheets over all furniture, pews and fittings in the areas of the Nave and North Aisle etc. which are likely to be affected by dust and dirt during the works.

- 3.1.3 Supply and lay polythene sheeting and hardboard to all retained elements of the floor adjacent to the work areas to protect them from dust, dirt and damage. Similarly, where contractors need to barrow away waste material (internally and externally), the same protection shall be provided to retained floors and surfaces that may be dirtied or damaged by the work process.

- 3.1.4 Allow for protecting the lower-level wall memorials within the North Aisle, the Pulpit, and vestment cupboard from accidental damage and allow for covering with osb/sterling board boxings and dust covers (as required during the work).

- 3.1.5 The contractor is to remove all loose and moveable furniture and fittings from the areas of works to enable the works to proceed. The contractor shall allow for dust sheeting same and moving said items if required as the works proceed.

- 3.1.6 Allow for providing and fixing warning notices outside the church warning church users/visitors and members of the public of the works. Similarly, allow for providing and fixing all necessary safety signage, guarding and boards etc. within the church to close off the work areas as required and/or restrict any unauthorised access to open excavations, floor voids etc. during and outside of work hours.

Allow for liaising with the Employer re. retaining routes through the church at various stages of the work, to enable services and worship etc. to continue. The contractor is advised to consider phasing the areas of work if beneficial to do so.

- 3.1.7 The appointed archaeologist shall be given due warning of the start date for the works and be advised as to the programme for the excavation works, in order to ensure they have the capacity to attend upon the works as required.

The contractor shall allow for liaising with and attending upon the archaeologist, and for providing sufficient time for the archaeologist to record and remove any findings where required.

3.2 FLOOR LEVEL/GROUND REDUCTION

- 3.2.1 **NOTE. No excavations or ground reductions are to be undertaken without the archaeologist in attendance, unless they have given their express consent otherwise. The archaeologist shall have the authority to suspend the works in order that appropriate recording can be carried out.**

The contractor shall slow or suspend the works should the archaeologist require it.

The contractor and the archaeologist shall both record any time lost to the contractor as a result of this.

The contractor shall utilise their best efforts to offset the costs of any delays or suspensions by redirecting the workforce to other areas of the works wherever this is practical.

- 3.2.2 Allow a provisional sum of £3,000.00 for costs in relation to the archaeologist's services (to be paid direct by the Employer).
- 3.2.3 Allow for 3 days of 'lost time' to the programme due to delays due to the archaeologist Halting/pausing the works (note the requirements of clause no. 2.23 regarding recording any delays that do occur). The contractor is to programme the works to minimise the impact of any delays in excavations and shall use their best offices to ensure the workforce can be either redirected to other areas of the works to minimise the impact of any delay and cost to the project.
- 3.2.4 Allow for unfixing and freeing from the pew decks all of the pews, pew front and pew storage within the North Aisle and the front 4 no. rows of pews within the Nave (ignoring the adapted pew to the lectern), as indicated on the architect's drawings. The contractor is to take care to reduce potential damage to the pew deck boards and kerbs to facilitate their reuse.

Note: the supports for the heating pipes along the north wall are fixed to the pew ends along this wall. Some of these pews may therefore need to be removed in stages, to allow for the removal of the heating pipes.

Allow for meeting with the architect on site to agree and confirm the method for dealing with junctions between removed pews and retained pews/pew fronts, prior to removal.

- 3.2.5 For tendering purposes, allow for removing and disposing of all of the removed pews, less any pews which may be utilised/reused for the proposed works. Set the North Aisle pew front aside for later reuse. **The Employer is to advise the contractor of any pews which are to be left in their custody (to be sold/given away etc.) prior to this.**

Note: retained loose pew fronts etc. are to be transferred to the contractor's workshop in a timely manner and stored there until reinstatement, rather than being stored loose within the church.

- 3.2.6 Carefully lift and remove all existing cast iron floor grates within the work zones (as they are being worked on) and safely set aside.
- 3.2.7 Within the North Aisle and Nave, to the areas indicated, carefully take up the pew deck

floorboards and pew deck 'kerb' edging and set aside all boards and kerbs suitable for reuse. Allow for cutting back the floorboards to be retained at the front of the Nave to the east and west of the proposed level floor.

The architect is to be advised of any concerns regarding the suitability/condition of the existing timber in respect of its reuse.

- 3.2.8 Take up the existing floor joists and wall plates etc. not required in these areas and dispose of them, with the exception of the area of floor directly underneath the pulpit, where a raised octagonal section is to be retained/constructed within the perimeter of the pulpit.

Allow for carefully sweeping and removing and disposing of debris and dust etc. from the existing pew deck floor voids, ensuring any archaeological finds are set aside for the archaeologist to record.

- 3.2.9 Allow for meeting with the archaeologist and the architect on site to assess all areas of the exposed floor sub-structure. Allow for agreeing on any additional support required beneath the pulpit (or any other areas) with the architect, and for taking direction from the archaeologist regarding the excavations.

- 3.2.10 With the archaeologist in attendance, carefully excavate the chalk base to reduce the floor void levels to provide a min. 150mm deep void beneath the bottom of the proposed floor joists, as indicated on the architect's drawings. For tendering purposes assume excavations of varying depths, between approx. 55mm - 160mm.

Allow for all waste materials to be removed from site and for paying all charges in respect of the same.

Allow for slower, more controlled and less economic digging next to column bases and other retained structures including sleeper walls and walls to existing ducts.

3.3 HEATING ENGINEER & PLUMBER

- 3.3.1 Inspect existing heating system in area of works and boiler prior to submission of tender.

- 3.3.2 The contractor's heating engineer is to assess the existing heating pipes running above the floor along the north wall of the North Aisle and to advise upon the recommended diameters of the proposed replacement radiator pipes and radiator sizes etc. to suit the existing heating system. The heating engineer is to advise the architect of any recommendations which differ to the work described below.

- 3.3.3 *North Aisle:* Remove and dispose of the existing heating pipes running along the north wall above floor level and allow for altering the existing valves to suit the proposed level of the new pipes. Leave pipes ready for the alterations to the heating system specified below.



The existing valves within the North Aisle.

- 3.3.4 *North Aisle:* Remove and dispose of the existing cast iron radiator ER1, adapt flow and return pipework (to run within new floor void) and leave ready for installation of replacement flat panel radiator.
- 3.3.5 *North Aisle:* Supply, fix and connect new heating pipes to the existing heating system to serve the following:
- Supply and install 3 no. 1200mm wide x 600mm tall, and 1 no. 800mm wide x 600mm tall (replacing ER1) wall-mounted SH4 Faraday Type 11 double convector flat panel radiators with thermostatic valves to the north wall of the North Aisle, as indicated on the architect's plan.
- Supply and install all required valves, pipework, joints and pipe shrouds. The contractor is to ensure the new pipework is compatible with the metal of the existing pipes.
- 3.3.6 *Nave:* Allow for adapting and lowering the route of the above-floor radiator pipes to the south side of the Nave (serving radiator ER3) so they enter the floor void within the proposed storage space underneath the lectern platform before rejoining retained pipes, as indicated on the architect's drawings. Supply and fix pipe insulation to the pipes where they run through the floor void and lectern cupboard space.
- 3.3.7 *North Aisle:* Allow for adapting pipework to and for lowering the existing radiator ER2 so it sits on the church floor level (note: this will need to happen in conjunction with new floor works specified later).
- 3.3.8 Supply and fix insulation to all new concealed pipework (in accordance with clause no.

2.10.4).

- 3.3.9 Upon completion of the works to the heating system allow for filling, testing and commissioning of the system, ensuring the new radiators are balanced with the existing. Include the supply of any sundries in connection with the same. Allow for reconnecting any temporarily suspended services to enable the works, and allow for any necessary electrical certification to be provided.

Note: Final route for pipes to be agreed on site with the architect.

- 3.3.10 Allow 5 hours of additional heating engineer's time, to be used as directed by the architect.

3.4 ELECTRICIAN

- 3.4.1 Allow for making such temporary connections and disconnections as necessary to enable the works to proceed and to maintain electrical services for the employer in the remainder of the church.

- 3.4.2 Note: A number of electrical cables and conduits currently run within the floor voids to the pew decks which will need to be rerouted/lowered (if live) or decommissioned and removed (if redundant). For tendering purposes, allow 3 days of electrician's time for assessing these following the removal of the pew decks and for rerouting/decommissioning works. Allow a provisional sum of £300.00 for materials in respect of the same.

The contractor is to advise the architect of the actual time and cost of materials incurred in respect of this prior to proceeding.

- 3.4.3 Above the existing pew deck level, allow for assessing the conduit currently running to the north of the pew partition between the North Aisle and Nave, to the west of the Pulpit. For tendering purposes allow for rerouting the conduit through the new floor void (if found to be live) and for relocating the electrical box to a location to be agreed with the Employer and architect.



3.4.4 Allow 5 hours of additional electrician's time, to be used as directed by the architect.

3.5 BRICKLAYER, CARPENTER & JOINER

3.5.1 **Note:** Where all new timbers abut external walls, they are to be protected from damp transference from the wall with a strip of DPM glued to the timber face before fixing. All screw fixings and anchors are to be in stainless steel.

3.5.2 Where honeycomb sleeper walls are proposed to support new timber floor construction, ensure chalk base is adequately solid and level before construction. Where necessary to achieve a level base for the brickwork, supply and lay limecrete before constructing.

Sleeper walls are to be constructed in well-burnt stock bricks bedded in lime mortar, as indicated on the architect's drawings. Allow for constructing honeycomb sleeper walls approximately halfway along both sides of the new Nave flooring (running E-W) to pick up floor joists and allow ventilation through the floor voids.

3.5.3 Allow for inspecting the condition of the existing brick walls to the floor ducts within the North and South Aisles with the architect. As indicated on Section F-F, allow for carefully reducing the heights of the walls (for tendering purposes, assume by 3 no. courses) and remove the existing mortar bed from the top face of the retained bricks. To the top retained course, allow for carefully cutting out half a brick every third brick along to provide additional ventilation to the new floor voids.

If the hardness of the existing mortar makes the above impracticable, consult the architect before proceeding.



3.5.4 Allow for making good to/consolidating the corner underneath the pew deck to the east of the North Aisle (adjacent to ER2). Once complete allow for supplying and laying a band of 6" square black quarry floor tiles in lime mortar adjacent to the column base (as indicated on the architect's drawings).



- 3.5.5 Supply and fix tanalised s/w wall plates to the sleeper walls as indicated, and supply and fix C24 50 x 150mm floor joists at max 400mm c/s, orientated as indicated on the architect's drawings. Joist spacings are to be adjusted to suit proposed single grates in the North Aisle, as indicated on the proposed joist layout plan (drawing no. 1794/5-008). Where double joists are indicated allow for bolting together with 6mm diam. washered nuts and bolts at 900 c/s. Where single gratings are proposed, allow for similarly forming trimmers to pick up intermediate floor joists and to frame openings for the gratings (refer to section B-B). Allow for supplying all necessary joist hangers and straps etc.

Where the existing pew decks have been cut back within the Nave, allow for reconstructing the front edges to the pew decks (in line with columns NN1 & NS1) reusing the existing floor joists and pew deck kerbs, as indicated on the architect's drawings.

Reuse and adapt the existing floor joists and pew deck kerbs to form octagonal edging to the raised section of floor directly beneath the pulpit.

Similarly, reuse and adapt existing floor joists and pew deck kerbs to form the edging between the retained raised floor to the east of the Nave (adjacent to the lectern, pulpit steps, and retained pew fronts) and the new level flooring, as indicated on the architect's drawings.

- 3.5.6 Supply and fix stainless steel angles to support the edges of the existing and proposed cast iron gratings over floor ducts, as indicated (refer to architect's drawings numbered 1794/5-006D and 1794/5-007B). Along the length of the North wall, allow for supplying and fixing 40 x 40 x 5mm stainless steel angles to support grating angles, as indicated. Supply and fix approx. 20mm x 20mm compriband strip (anthracite) between grating angle and the wall, to accommodate unevenness to the wall and the depth of the plaster (dimensions to be checked on site). Fixings within the North wall are to be bedded in resin. For tendering purposes, allow for the sizes indicated on the architect's drawings (to be adjusted/agreed on site with the architect if required).

Supply and fix 5mm thick neoprene strips over all of the angles supporting new gratings, to ensure the gratings sit flush with the adjacent floorboards. Where angles are supporting existing gratings, allow for supplying thicker neoprene strips (for tendering purposes assume 8mm).

- 3.5.7 Supply and lay cast iron gratings over the proposed ventilation ducts as indicated

on the architect's drawings. Gratings to be 6" W x 24" L x 1/2" D Ornamental Grating No. 967 supplied by J & JW Longbottom (Holmfirth, Huddersfield).

For tendering purposes, allow for an overall 10.8m length of gratings against the north wall in the North Aisle, 7 no. single 24" long 'island' gratings, and 2 no. single 900mm (approx.) gratings adjacent to the columns in the Nave (to be remeasured on site). Allow for cutting the gratings to length as required, and for cutting holes for the radiator feed and return pipes to pass through (where the ends of adjacent gratings meet).

Note: The Employer has within their possession 3 no. approx. 950mm long cast iron gratings and 3 no. part-length gratings (all 8mm thick), which will be supplied to the contractor to use in place of new gratings described above, where appropriate.

- 3.5.8 Allow for preparing retained floorboards for relaying. Allow for cutting to length, cleaning, filling any small cracks or holes and carefully sanding the floorboards to be reused. Once properly prepared, brush apply 2 no. coats of Osmo Polyx-Oil Original in a clear matt finish to the floorboards, in strict accordance with the manufacturer's instructions. Allow for preparing a trial application for the architect's approval before proceeding.

If new floorboards are required due to a shortfall of reusable boards, supply 20mm thick pitch pine floorboards, in widths to match the existing boards where possible. Allow for treating all new floorboards with 2 no. coats of Osmo Polyx-Oil Original, as described above. Allow for locating any new floorboards along the side of the gratings to the North wall.

- 3.5.9 Allow for relaying and fixing retained pew deck floorboards over the new floor joists. Over underfloor heating pipes and electrical conduits etc. allow for ensuring the floorboards are butt-jointed and screw fixed to enable future access to these services.
- 3.5.10 *Nave:* To the east of column bases NN1 and NS1 allow for supplying and laying a band of 6" square black quarry floor tiles on a lime mortar bed to the east side of the column bases as indicated, to match the existing tiles as closely as possible. Allow for supplying and laying a narrow length of York stone adjacent to the tile bands, where the pew deck has been removed (all to be bedded in lime mortar).
- 3.5.11 *Nave:* To the pew 'front' beneath the lectern, allow for removing the middle stile and 2 no. adjacent vertical boards where a cutout has been made for the base of the lectern (see below) and allow for replacing using appropriate boards etc. from removed pews. Allow for removing the cushion hooks from the back of the pew.



Allow for removing the lower part of the pew backing (underneath the mid-rail) and for adapting to provide 4 no. approx. 400mm W x 325mm H hinged doors to the lower part of the pew to enable the space underneath the lectern to be used for storage, as indicated on the architect's drawings. Supply and fix black powder-coated hinges and 38mm round black cupboard door knobs. Cupboard doors to be comprised of reused tongue-and-groove vertical boards set within a solid frame, reusing joinery from removed pews where possible.

3.5.12 Allow for forming 2 no. fixed pew fronts within the Nave, as indicated on the architect's drawings. Allow for reusing the removed pew front from the North Aisle (opposite ER2) and suitable parts of removed pews to provide 2 no. approx. 2000-2040mm long pew fronts, and allow for fixing to the new pew deck kerbs.

3.5.13 *South Aisle:* Allow for making good to holes within retained pew front following relocation of heating pipes.



Allow for removing the cushion hooks from the back of the pew.

3.5.14 Allow for reinstating all removed floor grates.

- 3.5.15 Allow a provisional sum of £400.00 for any repairs identified to stone column bases following removal of pews/pew decks (to be carried out by a qualified stonemason), to be used as directed by the architect.
- 3.5.16 Allow 5 hours of additional bricklayer's time for sundry works as directed by the architect.
- 3.5.17 Allow 5 hours of additional carpenter/joiner's time for sundry works as directed by the architect.

3.6 PLASTERER, PAINTER & DECORATOR

- 3.6.1 Prepare and seal any new/newly exposed oak joinery and apply a minimum of 2 no. coats of selected Osmo woodstain, as previously specified under 2.14.7, following approval of samples.
- 3.6.2 Where pews have been removed from the North Aisle, allow for 5m² of low-level lime plastering to the North wall and allow for continuing the plaster down to the top of the stainless steel angles. Allow for meeting with the architect on site following the removal of the pews to inspect the plaster and agree the extent of making good/replastering to be carried out.
- 3.6.3 Following completion of decorating works, allow for gentle cleaning down of internal lower-level glazing within the North Aisle and east end of the South Aisle with deionised water to remove any dust incurred by the works.

3.7 COMPLETION OF THE WORKS

- 3.7.1 Externally, make good and reinstate any external surfaces disturbed by the works/barrowing of waste etc., and ensure the churchyard is left in a comparable condition the start of the work.
- 3.7.2 Internally, clean all areas disturbed by the works and affected by dust and leave in a condition comparable to the start of the work. Clear away and remove all protective sheeting and boards.

End

Note: Ensure inclusion of contingency sum (clause 1.24) within tender.