

SPECIFICATION

of

WORKS AND MATERIALS

for

Porch Wall Repairs

at

St. Bartholomew's Church,
Wigginton, Hertfordshire

for

the Parochial Church Council of
St. Bartholomew's

Cannon, Morgan & Rheinberg Partnership
Chartered Architects

2 Stagenhoe Bottom Cottages, Lilley Bottom Road, Whitwell, HITCHIN, Herts SG4 8JN (Tel: 01727 861622)

Hearn's Yard, Alma Road, Chesham, Bucks HP5 3HB (Tel: 01494 791066)

PRELIMINARIES

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1. Names of Parties

a) Employer

Parochial Church Council of St. Bartholomew's, c/o Mr. Paul Walker
e-mail: pauljwalker273@gmail.com
post: St. Bartholomew's Church, Wigginton, TRING, Herts, HP23 6DZ

b) Architects

Cannon, Morgan & Rheinberg Partnership, Chartered Architects of 2 Stagenhoe Bottom Cottages, Lilley Bottom Road, Whitwell, HITCHIN, Herts SG4 8JN, and Hearn's Yard, Alma Road, Chesham, Bucks HP5 3HB.

2. Position of Site

The site is named in the letter of invitation. The contractor should make himself familiar with the location and general character of the site, its approaches and means of access, bearing in mind delivery of materials and labour necessary for the works. The contractor should allow for storage of materials and make himself thoroughly acquainted with all matters affecting his tender. No claim will be considered or allowed in the final settlement for insufficient information.

3. Inspection of Drawings

In this particular situation the work consist of repairs to existing stonework. The extent of faults, damage and general deterioration is visible over the defined Area of Work, see drawings Nos 2261/5/A3:1 Rev 'A', A3:2 & A3:3. The extent of the repairs has been determined by a surface and trial-hole survey.

4. Scope of Works

This specification does not aim to detail all of the operations and materials that will be required to achieve the results described, and for the proper execution of the works. The contractor is, however, to include in his quotation all materials and labours necessary, and where latitude is left for selection of materials the contractor is to use such materials as would be regarded as suitable for the works concerned, within the limits of good practice.

5. Specific Guidance

The absence of specific guidance on any detail of the work will not be regarded as entitling the contractor to additional payment for such an item of work, if the need for this is implied or can reasonably be assumed as part of the requirements descriptively outlined in the specification or indicated on the drawings described below. The contractor is to include for the costs of all works necessary to fulfil the work described and if he regards these as being not necessarily implied in the description he should describe the works and include those in a separate schedule, which will help to provide a basis for calculating costs of these works in the settlement of the final account.

6. Drawings

The works are to take down the right hand side Porch stone wall, provide adequate new foundation and reinstate the removed wall as illustrated by drawings Nos 2261/5/A3:1 Rev 'A', A3:2 & A3:3. This specification gives a description of the works to be carried out.

7. British Standards

The works are to be carried out as far as practicable in conformity with normal standards of good practice. The materials generally to conform to British Standards where these apply, and methods of construction where not defined in the specification are to be in accordance with the recommendations of British Standard Codes of Practice.

8. Regulations and Acts

The works are to be carried out to the requirements of the Building Regulations and Local Bylaws and the requirements of Acts relating to the Safety, Health and Welfare of workpeople, and shall allow for all costs in so doing.

9. Completion Date

The porch is the main public access to the church and hence it should be closed for the shortest possible period. The earliest possible completion date is to be aimed at and the contractor should state the time he requires between the date of occupation and the completion of the work for handing over to the client.

10. Variations

No variations or additional costs to the contract are to be made without written consent of the Architects. No claims for additional payment will be considered except as provided in the Form of Agreement of Contract (as mentioned) which will be used for the purpose of this work.

11. Instructions

The contractor is to accept instructions only from the Architects. Any instructions issued by unauthorised persons should be immediately referred to the Architects for confirmation.

12. Damage

The contractor is to accept responsibility for and make good all damage caused to existing roads, paths and neighbouring ground by possession of the site. Particular care is to be taken with regard to any adjoining salt-glazed drains.

13. Insurances

The contractor is to take up Public Liability Insurance: Injury to persons or property – insurance (for any one occurrence or series of occurrences arising out of one event). The contractor should take out insurance specific to the works for the full reinstatement works a Joint Names All Risk Policy plus the Percentage if stated for professional fees for the duration of the works up to the Practical Completion Date. The contractor is to provide evidence of Insurance Cover if required by the employer.

14. Plant and Scaffolding

The contractor is to supply all scaffolding and plant required for the works and is to remove and cart away from the site at completion.

15. Responsibility for Subcontractors

The contractor will be required to enter into contracts with all subcontractors paid through him to bind them with him with regard to carrying out of the work, time for completion, damages for non-completion and maintenance period.

16. V.A.T.

The tender figure should be exclusive of V.A.T. and certificates issued by the Architects will exclude V.A.T. This tax where applicable is to be a direct charge between client and contractor.

GENERAL CONDITIONS OF CONTRACT

17. Maintenance

The contractor shall make good all defects, shrinkages, or other faults that occur within the maintenance period and are due to indifferent workmanship, or materials used not in accordance with the specification.

18. Lump Sum

The figure quoted should be a lump sum, subject to no fluctuations of prices in labour and materials, and should be open for acceptance eight weeks after submission of tenders.

19. General Attendance on Subcontractors

Attend upon, unload, provide storage space, working space and hoist for, cut away for and make good after all trades, including all subcontractors except in such respects as the latter definitely undertake to provide their own attendance.

Afford to all firms or persons engaged upon the works or required to take measurements or other legitimate business all reasonable facilities thereof and the use of such scaffolding, ladders, hoists, water, watching, lighting, power as required for the purpose of the works and provide and erect and remove any special scaffolding or hoists, etc. that may be required.

The contractor is to give the subcontractors and other parties working on the premises all information reasonably necessary to enable them to properly set out and execute their work in harmony with the surroundings and with other trades and is not to allow them to proceed otherwise.

CONTRACT PARTICULARS

20.

The form of Contract under which the work will be carried out will be by Exchange of Letters, Signed Specification, Signed Drawing and Signed Copy of Contractor's Tender Submission.

The letter is to include agreed Contract Value, Payment Periods, a Date for Possession, an anticipated Completion Date, details of the agreed Contractor's Compound and details of any restricted areas of access for the duration of the Works. Should a dispute arise, initially this should be settled by negotiation between the parties involved in the Contract.

A Maintenance Period will not apply to these repairs.

A. Site Description

St. Bartholomew's Church stands at 208m (682ft) above sea level and is the highest parish church in the county of Hertfordshire.

St. Bartholomew's is accessed off the road known as "The Twist", changing to the Chesham Road off the southern roundabout on the Tring Junction of the A41 Tring-Berkhamsted By-Pass. Its entry door is approached through a lynch gate and the churchyard on the southern side of the church off Chesham Road, almost on the junction with Hemp Lane.

The Church Building has a unique character. Its walls are constructed from a variety of materials; flint rubble faced with rough flint and dressed with clunch stone. It has a contemporary Church Hall addition built in flint stone infill with quoins and window dressings in dense concrete block to elevations in public view and concrete block where out of view to the general public.

The Church Building acts as a Community Centre for the Village and the building is used throughout the week for variety of activities. These activities will need to be taken into account in laying-out hoardings, positioning of work access routes and the Contractor's compounds as not to interfere with the activities.

It is envisaged that the period of the work on site and the number of operatives is outside the requirements of the Construction Design Management Regulations. However, the principles of maintaining a high level of safety and keeping the level of risk to the general public, is to be applied.

B. Scope of the Works

Isolate the work area at the porched front entrance of the Church.

Prop and support the roof structure. See drawing № 2261/5/A3:3 for suggested roof support.

Carefully remove existing stained glass panel.

Take down the right hand side flint and stone wall; marking and retaining on site all stonework and flints for reinstatement.

Excavate new foundations.

Break-out existing drain-runs and gullies; retaining materials for reinstatement of a reformed drain arrangement, including the re-use of the existing 5-holed stone drain covers.

Any repairs to the south wall where the porch abuts are to be made good and in the same materials as present.

C. Protection, Scaffolding and Security

Subject to agreement with the Client, supply and erect temporary fencing to the defined working areas. Externally maintain the existing entrances/exits with the exception of the Church entrance door immediately behind the porch. Provide sheet boarding to protect any vulnerable walls or ground surfaces in the vicinity of the works.

The locations are to be agreed with Client for the storage of the stone to be used for the works and a skip or a waste gathering area for waste products resultant from the works.

For the purposes of public safety the agreed works area is to be segregated from public access for the duration of the works.

The design of the Church and the nature of the works do not warrant the use of hoardings which completely envelop the work areas. The work is at ground level and there is a need to have good light levels, preferably natural lighting, specifically for the removal and reinstatement of the stones. Good natural light will allow for a good blend of the newly worked stone with what will remain. It is anticipated that the works will not provide access to materials attractive to theft, i.e. lead etc. Hence the more relaxed attitude to site fencing.

For the purposes of Church security and reducing the potential for vandalism no loose tools or equipment are to be left overnight or unsecured. If this measure proves to be impractical the Contractor is to arrange with the Client storage space inside the Church Building.

No ladders or similar are to be left outside unless securely padlocked and chained to suitable identified chaining points.

D. Surface-water Drainage

Investigations and drainage works have been carried out in advance of the proposed work. The exposed drains revealed a cracked salt-glazed drainage-junction, now repaired and a redundant gully. On a visit, agents of Diocesan Advisory Council advised removal of existing gullies & drain-runs, and the replacement of exposed drains in underground-grade plastic; reinstating active gullies to match existing, reusing materials and introducing a proprietary threshold drainage channel across the front edge of the porch.

E. Demolitions

Prior to demolition works, take out existing free standing porch benches for storage in a location to be agreed with the clients. Take record photographs of the wall and drainage to be demolished / removed to assist reconstruction works.

Carefully remove stain-glass panels to timberwork frame and set aside for reinstallation on completion of works.

Protect entry door to Church, stain-glass and opposite (left hand side) porch wall as well as the tiled porch floor.

Remove the guttering and downpipe in the immediate vicinity of the works.

Erect scaffold/props to support Porch's roof in a manner as to maintain workspace clearance.

Lay out boarding on surrounding ground for storage of materials to be reused in reconstruction works.

Take up the dressed cobble sets across the threshold of the porch, clean and set aside for reinstatement after the installation of the proprietary drainage channel.

Break-out and remove the concrete subbase to the depth sufficient for the installation of the drainage channel.

F. Materials

F.1. Concrete

Aggregates and sand are to be in accord with current British Codes of Practice. The coarse aggregate is to have a nominal size of 20mm to 5mm. Ordinary Portland Cement is to be used. The Concrete Mix is to be composed in volume measure; by 1 unit of cement to 6 units of coarse aggregate or alternatively a 1:3:6 mix, where '3 units' of fine aggregate (sharp sand) is added to the 1:6 mix to improve workability.

For the period of curing, the concrete is to be protected from inclement weather conditions.

F.2. Flints

In carrying out the demolition work, all flints and large stones used in the construction of the porch wall are to be cleaned of mortar and set aside for reuse. Where there is a short fall of material, the new flints are to match as closely as possible the existing flints' knapped finish.

The existing construction of the retained porch wall is to be matched in pattern finish; copying where necessary wide mortar jointing with flint chips.

In laying out the wall, long deep flints are to be inserted to tie-in the surface face to the mortar stabilised rubble core of the wall, assuming the core is of this type of construction.

F.3. Stone

We believe the original source of supply of the Church's Clunch Stone was the Totternhoe Quarry near Dunstable. The current material in that location is suspect. The preference is for a better quality material. Also a Clunch which matches the original is available from:

H. G. Clarke & Sons
Keepers,
High Street,
Weston Underwood,
Olney,
Bucks.
MK46 5JR

The present owner /contact being Mr. Angus J. Clark, Tel: 01234 - 712047

F.4. Mortar Mix

The new mortar mix should match as closely as possible the current mortar of the building. This is to be established either by sample analysis by a specialist mortar supplier or blending stone dust/sand and lime.

It is noted that other elevations have been repaired to high standard of workmanship and colour /texture match. It is understood that the formula adopted for these completed areas was of the mixture ratio: 2 parts stone dust, 1 part sand and 1 part lime by volume.

A sample area needs to be prepared for approval / comparison with the existing from either the specialist supplied mortar or the on-site created blend mortar. This sample panel needs to be approved before carrying out the full works.

Where possible, the clean mortar dust from the demolition works is to be reused in forming the mortar mix fill to bond the stone rubble core.

F.5. Lime-wash

If lime-wash application is to be used (to protect minor deterioration of stone faces, or to assist in blending-in the appearance of the new stonework with the retained areas), where possible material from existing removed decayed stone faces are to be salvaged, ground down, blended with extra fine texture sand and additional lime to achieve a colour rendering closely matching the overall Church's stone colour. Again sample areas are to be trialled for approval of the final mix and number of coats in application before carrying out full works.

F.6. Timberwork

The existing tilted timber frame on top of the wall is to be treated on all faces with preparatory preservative/stain finish, especially surfaces that will be concealed when the frame is reset into its vertical position.

All junctions are to be thoroughly cleared of material that may have accumulated over the long period of time of the fault, to ensure finish / true junctions.

All rebates accommodating the stain-glass panels are to be cleared of residual glazing compound, scraped clean and surface stain finished in readiness to reset the stain-glass panels.

F.7. Stain-glass

The stain-glass panels are to be inspected for any loose or defective staves. Repairs are to be carried out by a glazier / stain-glass specialist. The panels are to be refitted into prepared timber frame using proprietary glazing compound and appropriate spacer-blocks in accord with Glass & Glazing Federation practice standards.

G. Work Method

- G.1. Provide and fit temporary pipework to divert rainwater discharge in the vicinity of the work.
- G.2. Make safe electrical wiring.
- G.3. Excavate a 600mm wide x 600mm deep trench footing below the existing Finished Ground Level. Undercut the trench a minimum of 100mm under the subbase of the porch floor.
Excavate drainage trenches, gullies and the porch threshold channel trench. The depths of the excavations are to be set by the existing connecting drain inverts and gully construction details.
- G.4. Place concrete footings up to 150mm below Finished Ground Level. Provide concrete bases for the bottoms of the rainwater gullies and the subbase of the threshold channel drain.
- G.5. Reform the stone and flint wall from the salvaged material, adding additional matching flints / stones as necessary.
- G.6. Secure the timber frame between the top of the wall and the underside of the porch roof wall-plate in a vertical position.
- G.7. Form the brick lined rainwater gullies, respecting existing dully detailing.
- G.8. Lay new drainage connections in 100mm diameter 'underground'-type plastic drain pipes bedded in a 150mm pea-shingle bed and surround. Use proprietary transition junction fittings at the salt-glazed earthenware pipe to plastic pipe junctions, ensuring a smooth transition for the water flow between new / old pipe runs.

- G.9. Relay the dressed cobble stone threshold in front of the porch incorporating the slit drainage channel with connection into the surface water drainage system, (see drawing № 2261/5/A3:1) This slit drainage channel will be subject to public foot fall, so it will need to be wear tolerant; probably made of galvanised steel or cast metal, not plastic.
- G.10. Make good the tarmac path edge against the cobbled surface.
- G.11. Back-fill all excavated ground in the vicinity of the new work. Compact it and top dress to have final 150mm as topsoil left in readiness for grass seeding by others.

H. Completion of Works

On completion of the works all surplus materials, waste products are to be removed off site. All protective measures are to be lifted and removed. Any damaged surfaces to be reinstated to the original condition before works commenced. All adjoining surfaces where affected by splashes and stains or discolouration by the application of the new materials are to be cleaned down. All temporary fencing is to be removed and the site is to be handed back to the client in clean tidy state.