

**SPECIFICATION
FOR
SURFACE WATER DRAINAGE WORKS
TO
ALL SAINTS CHURCH
HOUGHTON REGIS, BEDFORDSHIRE**



**Michael Dales Partnership Limited
95, Sharpenhoe Road,
Streatley,
LUTON,
Bedfordshire LU3 3PS**

SPECIFICATION
of
WORKS TO BE DONE AND MATERIALS TO BE USED
in connection with the
GENERAL REPAIRS
to
All Saints Church
Houghton Regis,
Bedfordshire.

May 2021

1.00 PRELIMINARIES

- 1.01 The Employer is All Saints PCC
c/o The PCC Secretary
193, Cemetery Road,
Houghton Regis,
DUNSTABLE ,
Bedfordshire.
LU5 5DF
- 1.02 The Architect & Principal Designer is the Michael Dales Partnership Limited
95 Sharpenhoe Road, Streatley, Luton, Bedfordshire.
Telephone Number (01582) 881210.
- 1.03 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 on the Architect's photo sheets and drawings and/or described in this specification.

Works comprise the alteration and repair to rainwater goods, and the surface water drainage system.

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 secure the works 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.

1.04 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.

1.05 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 project is not currently considered to be notifiable – Contractor to advise if they believe it is likely to exceed 500 person days
Michael Dales Partnership will act as the 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 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 £150.00 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 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 £5,000,000.00 .
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

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 unfixd 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.

1.06 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.

Provisional sums in the tender are to be avoided. Where work cannot be costed, or further information is required, please seek further direction from the Architect.

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

1.07 Programme. The contractor's suggested programme for the works is to be submitted with their 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 a priced copy of this Specification with each item priced to show the cost of the work described shall be submitted to the Architect with the tender. 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.

1.08 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.

1.09 The Contractor is required to present their Application for Payment in the following manner:

Spec Item	Detail	Cost in Priced Spec.	% complete	Valuation
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1.10 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.

1.11 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 work "approved" is to be taken to mean approved by the Architect.

- 1.12 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 1.07 shall not vitiate the requirements of this Clause.

- 1.13 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.

- 1.14 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.

- 1.15 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.

- 1.16 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.

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

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

- 1.19 The Contractor is to provide secure site office and storage accommodation and toilet facilities for the use of the site staff and operatives and is to pay all rates and charges due in respect of any temporary buildings erected for the Works.

- 1.20 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.

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

1.22 **Include the sum of 10% of the cost of the works 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 Accounts.**

1.23 HEALTH AND SAFETY

The Contractor shall ensure that they, their 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.

1.24 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.

1.25 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.

1.26 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.

The local police and fire brigade should be advised if major repair works are to be carried out (see also Clause relative to Insurances).

1.27 Smoking is prohibited on the site.

1.28 The playing of radios during the working day will not be permitted except with the express permission of the Employers representative. The Contractor, their sub-

Contractors and operatives should bear in mind the purpose of the building and behave in an appropriate manner at all times.

- 1.29 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.
- 1.30 The storage of inflammable materials shall be outside the Church and well away from the building.

INSURANCE:

Dependant 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.

1.31 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 prior authority of architect.

Completed day-work sheets will only be considered for acceptance if submitted with seven 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.

1.32 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.

1.33 GENERAL PROCEDURES

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.

2.0 TRADE PRELIMINARIES AND PREAMBLES

2.1 **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 disposed of after consent from the archaeologist.

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 Turf lifting:

- check site, CAT scan for services
- cut grass as short as is reasonably practicable
- Carefully lift turf. Ideally cut down as deep as is practical to retain top soil with root structure. At least 3 inches.
- store turfs either on nearest available hard surface or on polythene sheeting in agreed locations.
- store turfs 'brown to brown & green to green' in stacks no more than 800mm high with bottom turf green side down and top turf green side up

2.1.6 Trench excavation:

- Strip top soil (of what remains) and store on site away from conservation areas and ideally on an area of hard standing.
- strip subsoil and store on site away from conservation areas and ideally on an area of hard standing.
- do not mix sub and top soils either in handling, storage or reinstatement.
- Provide hard standing for all mechanical diggers etc to prevent the grass and soft landscape being disturbed.

2.1.7 Reinstatement of turf after installation of pipework:

- replace subsoil in maximum 200mm layers and lightly compact each layer before placing next layer - do not over compact
- replace subsoil to finished level 50mm above adjacent subsoil profile in trench
- replace topsoil in maximum 200mm layers and lightly compact each layer before placing next layer - do not over compact
- replace top soil to finished level 50mm above adjacent top soil profile in trench
- relay turf by hand so that finished level is 50mm above adjacent ground level - do not compact
- place sieved topsoil in turf joints

2.1.8 General works affecting turf:

- do no work to turf or soils during excessively wet weather
- in very dry weather water both turf and soils stores

2.2 DRAINLAYER

2.2.1 The Clauses in EXCAVATOR AND CONCRETOR shall also apply to Drainage work where applicable.

The concretor shall allow in their price for excavation for grading and ramming the bottoms of drain trenches.

2.2.2 Surface water drains to be laid true to falls (minimum 1 in 60) and in straight lines with Hepsleeve, or Osma or Polypipe Plastic pipes and joints and fittings installed strictly in accordance with the manufacturers recommendations, of the diameters shown on the drawings, laid on and surrounded with 150 pea shingle. Inlet gulleys to be set on and surrounded with 150 grade 10 concrete and to be fitted externally with galvanised gully grids.

2.2.3 Inspection chambers on the surface water drains are to be Osma or similar approved by the architect, or:

Minimum 675 x 560 internal size, increased as necessary to accommodate number of branch drain connections, with 150 thick grade 21 concrete base, 225 thick walls in Class B Engineering bricks in cement mortar mix 1:3 with 150 thick grade 21 reinforced concrete cover slab with hole for inspection cover. Set on same 600 x 450 coated single seal inspection covers and frames of the appropriate weight. Alternatively the Contractor may use plastic inspection chambers of an approved make, providing that they are suitable

for the purpose, and fixed strictly in accordance with the manufacturer's instructions and recommendations. Frames in landscaped areas to be light duty, and in footpaths and driveways medium duty. Set in base half round glazed channel with ranches as required. Form benching in bottom of chambers in grade 21 concrete properly finished smooth.

- 2.2.4 Any work to surface water drains is to be as specified for foul water drains. RWP's are to discharge over roddable gulleys with galvanised gulley grids.

Soakaways are to be formed with Polypipe Polystorm or equivalent approved proprietary plastic crates, installed in accordance with the manufacturer's instructions. Soakaways generally shall be a minimum of 1m x 1m internally and 1m deep below invert. Generally allow for supplying and laying 150mm sharp sand to the base of the soakaway, and wrap crates externally in a Terram geotextile membrane. Connect surface water pipes as specified, ensuring appropriate measures are taken to prevent the ingress of soil particles into the soakaway where the pipes are connected. Backfill the sides and top of the soakaway with 150mm pea shingle, and a further min. 150mm of excavated soil to the top of the soakaway.

2.3 BRICKLAYER

- 2.3.1 The Clauses in EXCAVATOR AND CONCRETOR shall also apply to BRICKLAYER where applicable.
- 2.3.2 Where specified, common bricks shall be sound, well burnt, flettons or stock bricks from an approved manufacturer to comply with BS 3921.
- 2.3.3 The mortar mix for brickwork below the damp proof course shall be cement: sand mix 1:3. The cement shall be sulphate resisting to BS 401.

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

2.4 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.

2.5 ACCOMMODATION

The Contractor is to provide all necessary temporary sheds, offices, mess rooms etc. as required by site operatives and as required under Health & Safety Legislation. Huts are to be sited in positions agreed with the Architect and shall be removed from the site before the works are deemed to have been completed.

The Contractor is to make proper arrangement for sanitary accommodation for operatives and site visitors etc. If such facilities exist within the Church the Contractor may, with the permission of the Vicar, use these subject to the Contractor maintaining them in a clean and tidy condition at all times.

2.6 WATER AND ELECTRICITY

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

2.7 CLEANING

Where any works have affected the interior of the church the contractor shall carry out a thorough clean of the area 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.

2.8 ARCHAEOLOGIST

The Employer shall appoint an archaeologist to attend during the excavation work. The archaeologist will have authority to suspend 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 the delays which may occur and record these in order that any additional costs may be ascertained.

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

3.0 SCHEDULE OF WORKS

3.1 GENERAL REQUIREMENTS

- 3.1.1 Provide and maintain protection to all soft surfaces/landscape adjacent to the works, to prevent them from becoming churned up.
- 3.1.2 Provide and maintain secure barriers to all excavations, trenches and work areas to protect the public and church users. Provide and maintain warning signage to deter unauthorised access to the work areas.
- 3.1.3 Provide and maintain boards over all excavations left unattended.
- 3.1.4 Allow for removal and disposal of existing (plastic) rainwater downpipes to Nave (clerestory) Aisles, Porch and Chancel. Provide temporary surface water drainage connections as required during works, and allow for appropriate soaking away of temporary drainage.
- 3.1.5 Allow for provide and maintenance of welfare facilities including a chemical W/C for the duration of the works, Location to be agreed on site with the Employer and architect prior to the commencement of the works.

3.2 EXCAVATOR & CONCRETOR

- 3.2.1 Excavate for surface water drainage system comprising new soakaways, new drainage runs and where access to existing surface water drainage is required, as indicated on plans, and to required depths for the works.

Where excavations are required for services and drains in grassed areas allow for carefully cutting and lifting turfs along the service line and set aside for relaying after installation.

Where services cut across hard landscape or paths allow for surface to be carefully cut and reinstated after installation.

Grub up redundant concrete, drainage, roots etc. and remove all unwanted material from site. Allow for all tipping charges in respect of same. All plant and tree waste to be disposed of in an environmentally friendly way. Retain topsoil on site for making good in location to be agreed with architect and churchwardens.

Carry out such temporary operations as required. Supply and fix all temporary necessary shorings and supports to enable safe and practical site works. Particularly to support existing walls and surrounding ground levels during excavations.

NOTE: Excavations are to be carried out under on site supervision and direction of the archaeologist. The archaeologist will require notice of all excavations and a program of these will need to be agreed in order that archaeological attendance can be accommodated. No excavations shall be carried out on the project without

the archaeologist in attendance or without their express permission to proceed in their absence.

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

The contractor and the archaeologist shall both record time lost to the contractor.

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 the attendance upon the archaeologist.
- 3.2.3 The Contractor shall allow for 5 days of 'lost' time, attending upon the archaeologist in connection with archaeological based delays for external excavations.
- 3.2.5 Allow 5 hours of Excavator & Concretor's time for sundry works as directed by Architect.

3.3 DRAINLAYER

- 3.3.1 Allow for adapting existing retained rainwater drainage pipework as required to make connection to the new elements of the surface water system .
- 3.3.2 Supply and lay new surface water drainage as indicated on plans together with roddable clay gullies with cast iron gulley grids and access rodding points etc. as indicated on drawings. Allow for excavations and adapting existing drainage in connection with same. Gullies to be set in 150 of lean mix concrete. Surface water drainage to be laid and fitted in accordance with manufacturer's recommendations.
- 3.3.3 Allow for constructing new Surface Water Inspection chambers as indicated. Allow for construction in most economic form whilst complying with building regulations. Covers to be finished flush with adjacent proposed finish levels, except where indicated in paving where covers are to be finished beneath reinstated paving slabs. Paving slabs over new inspection chambers to have a central 25mm hole core drilled to provide identification of IC location beneath. New inspection chambers to be 300mm diameter. Allow for average invert depth of 1m. Allow for reinstatement and making good to adjacent surface finishes disturbed.
- 3.3.4 Allow for clearing all existing rainwater gullies. Allow provisional sum of £250.00 for sundry replacement grates etc.
- 3.3.5 Treat all weed growth in a 300mm margin around all (existing and new) rainwater gullies with systemic weed killer. Repeat the process twice at 3 week intervals during the contract until re-growth ceases.

At end of process, rake away dead foliage, and 100mm of top soil.

Cover margin with geotextile, edge with 150mm tanalised board secured with tantalised pegs and top dress with 100mm of pea-shingle.

- 3.3.6 Along south aisle wall between side wall of porch and B8 and between B8 and B9 excavate against the south wall to reduce the ground level to reduce the moisture levels in the walls and tomb masonry internally against this wall.

Allow for excavating to a depth of 400 mm for a width of 400mm. Actual depth to be agreed on site with architect and archaeologist.

Supply and lay 450 x 450 x 50 grey concrete slabs on edge to support soils excavations and to provide edge to gravel specified later.

Supply and lay land drain pipe wrapped in terram. Pipes to be laid to fall to centre of bay.

Back fill over pipe with pea shingle leaving finish approximately 350 below present ground level.

Form connection from new land drain into surface water drainage system as indicated.

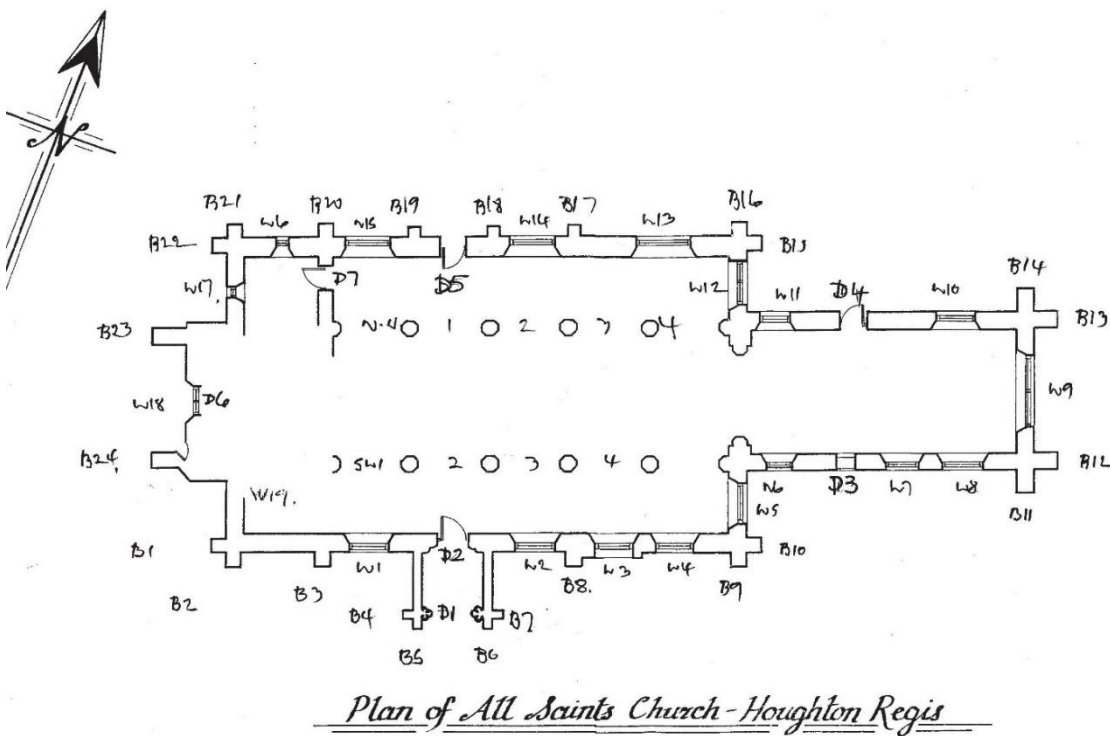
- 3.3.7 Allow for constructing 2 no. new soakaways as described in clause 2.2.4, and as indicated on the architect's drawings. Exact locations to be agreed with the architect and archaeologist on site.
- 3.3.8 Allow for locating existing soakaways 1-3 as indicated, and for excavating and clearing out of same. Allow for forming new access cover as for new soakaway construction. Allow for disposal of unwanted material, and for flushing through surface water drainage system.
- 3.3.9 Allow for provisional replacement of existing soakaways with new soakaway of type previously described subject to Architect's direction following their excavation.
- 3.3.10 Following all work to clear/form new soakaways, supply and bed approx. 240 x 240mm x 50mm thick Sawn York stone paving slabs centrally over locations of existing and new soakaways, to identify locations for future maintenance. Slabs to be bedded so they sit flush with the surrounding ground level, and do not cause a trip hazard.
- 3.3.11 Allow for excavating broken/damaged sections of drain identified on drawings and in drainage report and repair/replace sections of same, laid as for new drains.
- 3.3.12 Similarly allow for supply and installation of proprietary drain linings to existing pipes where identified on drawing by specialist installer.
- 3.3.13 Supply and fix new powder coated 100 x 75mm (nominal) rectangular aluminium downpipes and cast aluminium fittings to Nave (clerestory), Aisles, Porch and Chancel complete with terminal shoes to discharge over gully grids/ aisle roofs. Downpipes to be fixed with stainless steel studs resin anchored into the walls, with ss washered locking nuts fixed to both sides of the downpipe to maintain gap from wall where required. Powder coating colour to be from RAL/BS4800 range and selected by Architect from samples provided by contractor for best colour match with facing stonework. Allow for all fittings similarly powder coated and to make connection to existing outlets and porch gutters.

- 3.3.14 Allow for connecting existing water butt (to the North side of the Chancel) to the new surface water drainage, as indicated on the architect's plan. Supply and fit proprietary filtered rainwater diversion adapter to suit downpipe and an overflow connection back from the rainwater butt to the downpipe/drainage gully. Overflow and diversion pipework to be painted to match downpipes.
- 3.3.15 Allow 10 hours of Drainlayer's time for any additional sundry works as directed by Architect.
- 3.3.16 Allow provisional sum of £500.00 for any further drainage repairs identified.
- 3.3.17 Upon completion of drainage works, back fill external trenches, leaving spoil slightly raised to allow for settlement and reinstate turf.

3.4 **COMPLETION**

- 3.4.1 Clear away and leave church and churchyard clean and tidy. Allow for reinstatement of and making good to all hard and soft surfaces disturbed by the works.

NB. Ensure inclusion of contingency based upon the schedule of works as directed under clause 1.22



End