

4.00 Preliminaries

1.01 FORM OF CONTRACT:

The Contract will be in the form issued under the Sanction of the Joints Contracts Tribunal. "Minor Works Building Contract" 2016. The Conditions thereof, the headings of which are set out below, are to be read as incorporated herein.

- 1.1 Definitions.
- 1.2 Agreement etc, to be read as a whole.
- 1.3 Headings, references to persons, legislation etc.
- 1.4 Reckoning periods of days.
- 1.5 Contracts (Rights of Third Parties) Act 1999.
- 1.6 Notices and other communications.
- 1.7 Applicable law.
- 2.1 Contractor's obligations.
- 2.2 Commencement and completion.
- 2.3 Architect/Contract Administrators duties.
- 2.4 Correction of inconsistencies.
- 2.5 Divergences from Statutory Requirements.
- 2.6 Fees or charges legally demandable.
- 2.7 Extension of time.
- 2.8 Damages for non-completion.
- 2.9 Practical completion.
- 2.10 Defects.
- 2.11 Certificate of making good.
- 3.1 Assignment.
- 3.2 Person-in-charge.
- 3.3 Sub-contracting.
- 3.4 Architect/Contract Administrator's instructions.
- 3.5 Non-compliance with instructions.
- 3.6 Variations.
- 3.7 Provisional Sums.
- 3.8 Exclusion from the Works.
- 3.9 CDM Regulations-Undertakings to comply.
- 3.10 Appointment of successors.
- 4.1 VAT.
- 4.2 Construction Industry Scheme (CIS).
- 4.3 Interim payments up to Practical Completion.
- 4.4 Interim payment on and after Practical Completion.
- 4.5 Payment-amount and notices.
- 4.6 Failure to pay amount due.
- 4.7 Contractor's right of suspension.
- 4.8 Final certificate and final payment.
- 4.9 Failure to pay final amount.
- 4.10 Fixed Price.
- 4.11 Contribution, levy and tax changes.
- 5.1 Liability of Contractor – personal injury or death.
- 5.2 Liability of Contractor – injury or damage to property.
- 5.3 Contractor's insurance of his liability.
- 5.4A Insurance of the works by Contractor in Joint Names.
- 5.4B Insurance of existing structures and the Works by Employer in Joint Names.
- 5.4C Insurance of existing structures by Employer in own name.
- 5.5 Evidence of insurance.
- 6.1 Meaning of insolvency.
- 6.2 Notice under section 6.
- 6.3 Other rights, reinstatement.
- 6.4 Default by Contractor.
- 6.5 Insolvency of Contractor.
- 6.6 Corruption.
- 6.7 Consequences of termination under clauses 6.4 to 6.6.
- 6.8 Default by Employer.

- 6.9 Insolvency of Employer.
- 6.10 Termination by either Party.
- 6.11 Consequences of termination under clauses 6.8 to 6.10.
- 7.1 Mediation.
- 7.2 Adjudication.
- 7.3 Arbitration.

1.02 DRAWING AND SITE VISIT:

The drawings enclosed with the Tender Documents are listed in the letter of invitation to Tender and will form part of the Contract. They should be carefully examined in conjunction with a visit to the site to ascertain the general character of the work, site access, storage facilities and all other matters which will affect the price.

1.03 NOISE CONTROL:

The attention of the Contractor is drawn to the provisions of Section 60 of the Control of Pollution Act 1974, with reference to the control of noise in relation to any demolition or construction works and the need, particularly where such Works are adjacent to occupied property where a high sensitivity to the noise may be anticipated, to ascertain from the Mid-Suffolk District Council what requirements or restrictions, if any, shall apply to the Works in this respect. The restrictions may relate to the type of plant to be used, the methods of working to be adopted, the hours of working permissible and may in addition impose a maximum noise level at the site boundary which must not be exceeded. The attention of the Contractor is also drawn to the provisions of Section 61 of the Control of Pollution Act 1974, with reference to the issue of prior consent and any application under that Section should be made to the Mid-Suffolk District Council on the appropriate form available from them. The Contractor is to be held responsible for complying with such requirements, restrictions of consents, together with any other stipulations to which his attention may be drawn from time to time by the competent Authorities and is to allow in his Tender for any costs or expense arising from such compliance. No instruction issued to the Contractor by the Architect or his authorised representative shall relieve the Contractor from compliance with the Control of Pollution Act 1974. Further information is available in Advisory Leaflet No. 72 - 'Noise Control on Building Sites', obtainable from the Department of the Environment.

1.04 PLANT:

Provide all necessary for the proper execution of the works:

- a) Mechanical Plant and Vehicles.
- b) Non-Mechanical Plant.

1.05 SAFETY, HEALTH AND WELFARE OF WORK PEOPLE:

Provide for all costs incurred by complying with all Safety, Health and Welfare Regulations appertaining to all work people (including those employed by Nominated Sub-Contractors) employed on the site. Welfare facilities shall be to a standard complying with the latest Code of Welfare Conditions issued by the National Committee thereof. Such accommodation as the Contractor is required to provide shall be cleared away on completion and the area made good.

Provide industrial safety helmets for the use of all site personnel including all sub-contractors and employer's representatives.

1.06 LABOUR ON-COSTS:

Provide for all costs in respect of all workmen for:

- a) National Insurance Contributions.
- b) Pensions.
- c) Annual and Public Holidays.
- d) Travelling time, expenses, fares and transport.
- e) Guaranteed time.

- f) Non-productive time and other expenses in connection with overtime
- g) Incentive and bonus payments.
- h) Apprenticeship scheme.
- i) Redundancy payments.
- j) Any other disbursements arising from employment of labour.

1.07 SITE MANAGEMENT COSTS:

Provide for all on and off site management costs.

1.08 SITE MEETINGS (WHERE APPLICABLE):

Allow for arranging and attending site meetings with appropriate staff including representatives of Sub-Contractors and Suppliers as required. Site meetings will be held at regular intervals at dates to be arranged with the Architect.

1.09 SAFEGUARDING THE WORKS:

Safeguard the works, materials and plant against damage or theft including all necessary watching and lighting for the security of the works and the protection of the public. Provide shelter and fuel for any watchmen so required.

1.10 MAINTENANCE OF ROADS, ETC.:

Maintain public and private roads, footpaths, walls, fences, kerbs etc., and keep the approaches to the site clear of mud. The Contractor shall indemnify the Employer against any claims which might be brought and shall make good any damage caused by his own or any Sub-Contractors or Suppliers transport at his own expense or pay all costs and charges in connection therewith.

1.11 PROTECTION OF PUBLIC AND PRIVATE SERVICES:

The Contractor is to ascertain the presence of and protect, uphold and maintain all pipes, ducts, sewers, service mains, overhead cables etc., during the execution of the works. The Contractor shall indemnify the Employer against any claims which might be brought shall make good any damage due to any damage due to any cause within his control at his own expense or pay any costs and charges in connection therewith.

1.12 POLICE REGULATIONS:

The Contractor is to abide by all Police Regulations and pay all costs incurred thereby. He is to take care in loading and unloading, that the streets, footpaths and traffic are obstructed as little as possible and that inconvenience to other road users and general public is kept to a minimum.

1.13 AREA OF OPERATIONS:

Provide for taking reasonable precautions to prevent workmen, including those employed by Sub-Contractors, from trespassing on adjoining owners property or any part of the premises which are not affected by the works.

1.14 WATER FOR THE WORKS:

Provide clean fresh water for use on the Works, pay all charges in connection therewith, provide all temporary storage, plumbing services, connections etc., and clear away and make good on completion.

1.15 LIGHTING AND POWER:

Provide all artificial lighting and power for use on the Works, pay all charges in connection therewith, provide all temporary connections, leads, fittings etc., clear away and make good on completion.

- 1.16 TEMPORARY WORKS:
- Allow in all cases for altering, moving and adapting as necessary from time to time and for clearing away and making good on completion.
- 1.17 TEMPORARY FENCING, HOARDINGS, ETC.:
- Provide and maintain all necessary temporary fencing, hoardings, planked footways, guard rails, gantries and the like for the proper execution of the work, for the protection of the public and the occupants of any premises and for meeting the requirements of the local or other Authority.
- Tenderers should pay particular regard to the location of the site and should make due allowance for taking adequate precautions and safety measures.
- 1.18 GENERAL SCAFFOLDING:
- Provide all necessary temporary scaffolding for the proper execution and completion of the works and ensure before striking and removal that the requirements of any Sub-Contractor or Public Undertaking have been met.
- 1.19 NOTICE BOARDS:
- The Contractor shall not allow bill posting or advertising of any kind upon the works other than the erection of one board displaying his own name and address and those of any Sub-Contractors.
- 1.20 PROTECTING, DRYING AND CLEANING THE WORKS:
- Provide for carefully covering up the works and protecting the works or any adjoining property exposed by these works from inclement weather.
- Provide for removing all rubbish from the site both as it accumulates from time to time and on Completion.
- Provide for the protection of all work to be carried out and for cleaning the building inside and out, removing stains, touching up paintwork etc., and leaving the whole of the works clean and to the satisfaction of the Architect on Completion.
- 2.00 INSTRUCTIONS TO TENDERERS:
- 2.01 Should there be any doubt or obscurity as to the meaning of any item described in the Specification or shown on the drawings, the Tenderer should refer the matter to the Architect preferably at least four days before the date of the return of the Tenders. Written clarification of any such item will be given to all Tenderers by the Architect where this is considered necessary.
- Each Tenderer will be deemed to warrant that he has not:
- a) Communicated to a person other than the Architect the amount of his Tender in accordance with any arrangement or agreement so to communicate.
 - b) Adjusted the amount of his Tender in accordance with any arrangement or agreement between himself and any person other than the Architect.
- 2.02 Any breach of the foregoing warranty on the part of the successful Tenderer will render the Contract voidable at the option of the Architect.
- Each Tenderer will be deemed to warrant that he has not:
- a) Communicated to a person other than the Architect the amount of his Tender in accordance with any arrangement or agreement so to communicate.
 - b) Adjusted the amount of his Tender in accordance with any arrangement or agreement

between themselves and any person other than the Architect.

2.03 The Client does not bind itself to accept the lowest or any Tender. The Client also reserves the right to negotiate with any Tenderer to obtain an amended Tender Sum but any such amended sum will not be necessarily accepted by the Client. The Client will not be liable for any expenses incurred by Tenderers arising from the preparation of their Tenders.

2.04 Tenders must remain open for acceptance for one month from the date of their receipt by the Architect.

2.05 The Client reserves the right to require the successful Tenderer to commence work within seven days of the date of the official order to do so.

3.00 DEMOLITION AND ALTERATIONS:

3.01 GENERAL:

Provide all necessary shoring, scaffolding and temporary works incidental to demolitions and alterations for the adequate protection of the premises against damage.

3.02 PULLING DOWN:

Pulling down, taking out and cutting away shall be done with all reasonable care and the Contractor will be required to make good at his own expense any damage caused by these operations through any lack of reasonable precautions or safety measures.

3.03 MAKING GOOD:

The term 'making good' shall be understood to include for the re-instatement of any adjacent work which may be disturbed by the alterations and for fair joints up to the edges of old finishing's and all associated labours.

3.04 OLD MATERIALS:

Materials from demolitions shall become the property of the Contractor unless otherwise stated and allowance shall be made for clearing away. Materials to be set aside for re-use are so described in the Specification. Old materials becoming the property of the Contractor shall be considered for CREDIT value and allowance shall be made accordingly in the Tender Price.

4.00 EXCAVATION AND EARTHWORK:

4.01 GENERAL:

No more ground shall be removed than is absolutely necessary and if loose, soft or bad ground is met with, the matter should at once be reported to the Architect for his ruling.

Should the Contractor excavate to a greater depth or width than shown on the drawings, or instructed by the Architect he shall, at his own expense, fill in such greater depth or width of excavation with concrete as described for foundations.

The Contractor shall report to the Architect when excavations are ready to receive concrete foundations and shall not proceed with concrete until they have been passed and approved.

4.02 NATURE OF GROUND:

The Contractor shall determine for themselves the nature of the ground to be excavated and shall allow for excavating in whatever soil may be met with and for grubbing up and removing any drains, pipes, roots, old foundations and any other obstructions encountered.

4.03 TRENCHES FOR PIPES OTHER THAN DRAIN PIPES:

Allow for grading and consolidating trench bottoms to the correct levels, carefully backfilling each to avoid damage to the pipes, well ramming and removing excavated material from the

site and any necessary planking and strutting.

4.04 FILLING AROUND FOUNDATIONS:

All earth for filling shall, unless otherwise ordered, be selected hard dry material from excavations free from vegetable soil, roots and rubbish, well rammed and consolidated in layers not exceeding 225mm. thick, and well watered and consolidated to ensure proper compaction.

4.05 HARDCORE:

The hardcore shall consist of hard dry broken brick, concrete or stone or other inert material broken to pass a 100mm. ring and free from dust.

The blinding shall be clean fine sand, free from stones, rubbish etc.

Hardcore shall be consolidated with a roller, or vibrating roller to a compaction equivalent to that obtained with a 2½ to 3 tonne roller, care being taken that no damage is done to foundation walls.

5.00 CONCRETE WORK:

5.01 CEMENT:

The cement shall, unless otherwise stated, be Ordinary Portland Cement of British Manufacture complying in all respects with BS12: Part 2M. It shall be delivered in the original sealed bags of the manufacturer, plainly branded or in bulk.

5.02 AGGREGATE:

The fine aggregate shall comply in all respects with BS882 and shall consist of well graded coarse sand, passing 5mm. test sieve in Grading Zone 1 as defined therein.

The coarse aggregate shall comply in all respects with BS882 and shall consist of natural gravel, crushed gravel or crushed stone, well graded from nominal maximum size referred hereafter down to 5mm.

The all-in aggregate shall comply in all respects with BS883 and shall consist of aggregate containing a proportion of material of all sizes as obtained from the pit or other source, well graded from the nominal sizes referred to hereafter down to 5mm.

Each type of aggregate shall be obtained from one approved source capable of maintaining adequate supplies of consistently graded material throughout the Contract.

5.03 REINFORCEMENT:

Mild steel bars shall comply with BS4449.

Steel fabric reinforcement shall comply with BS4483.

5.04 WATER:

Water shall be from mains and kept free from any impurities.

5.05 STORAGE OF MATERIALS:

Cement shall be used in rotation of deliveries. If delivered in bags these shall be stored off the ground and kept in a clean dry condition.

Aggregates shall be stored and maintained in clean and dry conditions and each type of aggregate shall be kept separate.

Aggregate that has been exposed to frost shall be properly thawed out before use.

Reinforcement shall be stored by type, size and length, either off the ground or on clean surfaced areas.

5.06 PROPORTIONS AND STRENGTH OF CONCRETE:

The nominal mixes of concrete referred to hereafter shall have the following quantities of aggregate per 50Kg. of cement and shall be of the nominal maximum stated.

Nominal mix. (1:3:6 - 38mm. aggregate).
0.105 Cub.m. fine aggregate.
0.210 Cub.m. coarse graded aggregate.
11.5 N/mm² at 28 days.

Nominal mix. (1:2:4 - 19mm. aggregate).
0.070 Cub.m. fine aggregate.
0.140 Cub.m. coarse graded aggregate.
21.0N/mm² at 28 days.

5.07 READY MIX CONCRETE:

The use of ready mixed concrete must have the specific consent of the Architect and where authorised shall confirm to BS1926.

5.08 MEASUREMENT AND MIXING OF CONCRETE:

All cement shall be measured by weight the 50K bag of cement being used as a unit.

All aggregates shall be measured by weight, weight being calculated on the actual densities of surface dry aggregate determined by loose weight method in accordance with Appendix 'H' of B.S. group specification for concrete aggregates and sand.

Weights shall be adjusted as necessary for wet aggregates.

The amounts of water shall be the minimum required to produce a dense cohesive concrete of adequate workability to be determined by trial mixes. This amount shall be accurately gauged and adjusted from time to time to compensate for variations in moisture content of the aggregates as measured by an approved method.

All concrete shall be mixed in a batch type mechanical mixer. The fine and coarse aggregate and the cement shall be mixed for at least three turns, after which the required amount of water shall be added gradually while the mixer is in motion and the concrete mixed for not less than two minutes to a uniform colour and consistency.

On cessation of work, including short stoppages for meals, or any change of type of cement used in the mix, the mixers and all handling plant shall be washed out with clean water.

5.09 FORMWORK:

All formwork shall be erected true to line level and profile and shall be of adequate strength for its purpose. Formwork shall not be removed until sufficient time has elapsed to ensure that no distortion or deflection of the concrete will occur having due regard to all circumstances.

Where "Wrought Formwork" is specified allowance shall be made for lining with a suitable material, if necessary, to secure a smooth finish and for subsequently rubbing down surfaces left from the formwork with a carborundum stone to leave the concrete surfaces perfectly smooth with true arises.

Concrete described as 'finished fair' shall be similarly finished.

5.10 PLACING CONCRETE:

All concrete shall be transported and placed as rapidly as possible after mixing and in all cases within 30 minutes, by approved means, to prevent segregation and loss of ingredients.

5.11 CONCRETING IN COLD WEATHER:

No frozen materials or material containing ice shall be used and the mixing and placing at air temperatures below 2°C (36°F) will not be permitted unless, by agreement with the Architect, special precautions are taken.

5.12 CONSTRUCTION JOINTS:

Construction joints shall be arranged in approved positions. Before any new concrete is placed on old, all excess water laitance, etc., shall be removed from the surface of the joint. The surface shall then be well roughened, cleaned thoroughly wetted and covered with a thin layer of grout consisting of equal volumes of cement and sand to secure a good bond.

5.13 PROTECTION:

All concrete shall be prevented from drying out too quickly during hot weather by covering or other means. For covering and protection etc., during inclement weather see "Preliminaries".

5.14 FIXING REINFORCEMENT AND PRECAST WORK:

Allowance shall be made in connection with fixing reinforcement for providing all necessary annealed tying wire and ordinary distance blocks and spacers to secure steel in position prior to concreting.

Precast concrete work including items described as precast or in-situ, shall allow for hoisting, placing in position, bedding, jointing or building in with cement mortar.

6.00 BRICKWORK AND BLOCKWORK:

6.01 BRICKS GENERAL:

The common, facing and engineering bricks shall comply with BS3921 Part 2 M.

6.02 COMMON BRICKS:

The common bricks shall be 'Phorpes Flettons' or other similar and approved.

6.03 FACING BRICKS:

The facing bricks shall be as hereinafter described.

6.04 INSULATING LIGHTWEIGHT LOADBEARING BLOCKS:

Lightweight concrete blocks shall be 'Thermalite' standard loadbearing insulating blocks or similar.

6.05 CEMENT:

The cement shall be Portland Cement complying with BS12 Part 2 M.

6.06 LOADBEARING NON-INSULATION BLOCKS:

For situations not requiring thermal insulation values, e.g., internal structural walls, concrete blocks conforming to BS2028, 1364:1968 Type A or B with a minimum compression strength of 3.5N/mm² may be used.

6.07 SAND:

Sand for mortar shall comply with BS1200 and be well graded from 0.5mm. down in accordance with Table 1 therein.

6.08 LIME:

Lime for mortar shall comply with BS890 Part 2.

6.09 MORTAR PLASTICISERS:

Mortar plasticisers shall only be used by agreement with the Architect. Any resultant adjustment in the mortar mix shall be in accordance with the manufacturer's instructions.

6.10 DAMP PROOF COURSES AND CAVITY GUTTERS:

The material for damp proof courses and cavity gutters shall be standard bituminous damp proof course, to BS743 Type C, lapped 150mm. at angles and joints and sealed in bitumen, bedded in cement mortar.

6.11 MASTIC FOR POINTING:

Mastic for pointing shall be similar to 'Secomastic', 'Evomastic' 'Farmiloe Gunmastic' or other approved mastic. All mastics shall be gun applied.

6.12 PROPORTIONS FOR MORTARS:

Lime mortar only to be used.

6.13 MIXING MORTARS:

The ingredients for all mortars shall be measured in proper gauge boxes on a boarded platform the ingredients being turned over twice dry and twice whilst water is added through a rose. Alternatively mixing may be by means of an approved mechanical batch mixer.

6.14 BRICKWORK GENERAL:

In dry weather all bricks shall be well soaked with water before being laid and the tops of walls left off shall be similarly wetted before work is recommenced.

All bricks shall be well buttered before being laid and all joints shall be thoroughly flushed up as work proceeds.

Brickwork shall be carried up in uniform manner, no one portion being raised at one time more than 900mm. above another. All perpend, quoins, etc., shall be kept strictly true and square and the whole properly bonded together and levelled round at each floor.

Unless otherwise described four courses of the brickwork shall rise 38mm. above the same laid dry.

All fair face and faced brickwork shall be kept clean. Rubbing or staining brick will not be permitted.

6.15 BOND:

All brickwork shall be built in Flemish bond unless otherwise specified except half brick wall and half brick skins of hollow walls, which unless otherwise described shall be built in stretcher bond. No bats shall be used except where required for bond.

6.16 WORK IN COLD WEATHER:

No brickwork shall be carried out when the temperature is at or below 2°C (36°F) unless by agreement with the Architect, special precautions are taken.

7.00 ROOFING:

7.01 STACKING OF TILES:

Tiles shall be properly stacked on wood stages and straw on level ground.

7.02 FIXING OF FELT:

Felt shall be nailed to each rafter at not more than 200mm. centres.

8.00 CARPENTRY:

8.01 TIMBER:

All timber for carpentry shall be of sound carcassing quality and suitable for the purpose for which it is intended and is to be well seasoned and sawn square all round, free from excess of wane or discoloured sapwood, injurious open shakes, large loose or dead knots, decay and live insect attack and of the full dimensions specified.

8.02 'TANALISED' TIMBER:

Tanalised timber shall be pressure impregnated with "Tanalith" preservative to a dry salt nett retention of 4 kilos of "Tanalith" per cubic metre of timber.

Wherever possible the timber for "Tanalith" treatment shall be machined, cut to lengths, bored, morticed and otherwise cut to its final shape before being treated. Where this procedure cannot be fully adopted the cross cut ends, etc., should be liberally swabbed with "Wolmanol" in accordance with the manufacturer's instructions.

The treatment is to be carried out by, or treated timber obtained from, a firm approved by the manufacturers of the preservative.

8.03 STRUCTURAL TIMBER:

Structural timbers shall be to the appropriate Stress Grade as referred to on the drawings and shall be delivered to the site so stamped.

9.00 JOINERY AND IRONMONGERY:

9.01 GENERAL:

All timber and workmanship for joinery shall be in accordance with BS1186. The use of a timber not classified as suitable for the particular purpose in the tables attached to BS1186 will not be permitted without the consent of the Architect in writing.

9.02 PRESERVATIVE TREATMENT:

All timber in external joinery, including fascias, soffits, windows, panelled doors and frames, shall be DOUBLE VACUUM impregnated with 'Vascol WR' preservative, using the 'Vac-Vac' process of Hicksons Timber Impregnation Company (GB) Limited or PROTIM '80WR PREVAC SYSTEM.

Treatment shall take place after machining but before assembly and timber shall be seasoned to a moisture content of 25% or less prior to impregnation.

All forms of treatment used must comply with the following minimum standards:

1) The preservative shall be a minimum of 1% Tri-butyl Tin Oxide to BS4630 of 5% Pentachlorophenol to BS3175 or the equivalent in terms of other fungicides in accordance with BS838 Test 1.

2) Treatment shall be by impregnation under VACUUM to give a minimum loading of 0.08%W/W Tri-butyl Tin Oxide in the outer 3m. of the susceptible timber present with an average depth of lateral penetration of 6mm. and a minimum depth of longitudinal penetration of 36m. from any exposed end grain surface. This minimum result shall be achieved regardless of the species of the timber used. An approved water repellent shall be incorporated which shall not contain in excess of 0.5% paraffin wax.

3) Confirmation shall be obtained from the manufacturer of the intended paint scheme of its compatibility with the water repellent preservative solution when the latter has been applied

by impregnation under vacuum.

4) Evidence of compatibility with putties, mastics and sealants shall be made available in the form of Code of Practice for use of these materials.

5) Adequate evidence should be available to demonstrate that a satisfactory standard of quality control is exercised by the preservative supplier over the treatment activities of its licensed processors.

NOTE;

Where cross cutting, notching or boring are carried out after treatment all exposed end grain surfaces must be liberally swabbed with 'VASCELE' end grain preservative Certificates of Treatment are to be supplied to the Clerk of Works or other Architect's representative with all consignments of timber.

9.03 SCREWS, BOLTS, NAILS, ETC.:

Screws shall comply with BS1210 and nails with BS1202. Bolts shall generally be cup square with large washers and nuts. Other fixings are to comply with BS1494.

9.04 SIZES:

Wrought timber may be 3.2mm. less than the size stated for each wrought face or edge.

Wrought timber described as being to finished sizes, shall be of the full dimension given.

The thickness stated for chipboard, plywood, blockboard and the like are the finished thicknesses.

9.05 WORKMANSHIP:

Joinery over 200mm. wide, unless otherwise stated, shall be cross tongued. Cross tongued joints in joinery over 50mm. thick shall be double cross tongued.

All wrought surfaces shall be finished with a glass papered or scraped surface for decorations as required.

Any joinery that splits, shrinks or warps from want of seasoning, unsoundness or bad workmanship shall be removed and replaced without charge.

All framed work shall be prepared and knocked together loosely as soon as practicable after the Contract has been signed and not glued up until required for use. All glued joints shall be cross tongued.

Where timber is fixed with nails or described as screwed on, the heads shall be punched or countersunk and holes stopped.

All screws used for fixing hardwood shall be of brass.

Fixing plugs shall be of plastic and of approved proprietary brands and fixing shall be at such intervals as will provide adequate support.

All joinery work shall have slight rounding to all exposed edges.

9.06 IRONMONGERY:

Ironmongery shall be fixed with matching rustproof screws and shall be carefully protected until completion of the works.

10.00 PLUMBING AND ENGINEERING INSTALLATIONS:

10.01 BY-LAWS:

The whole of the Plumbing and engineering installations are to be executed in accordance with the Bye-Laws and Regulations of the Local Sanitary and Water Authorities.

10.02 GUTTERS AND PIPES:

See Schedule of Works for description of rainwater goods.

Sanitary pipework above ground shall be installed in accordance with BSCP 304.

10.03 INTERNAL COPPER TUBING:

The copper tubing shall be light gauge copper tubing to BS12871 Part 2 Table X.

The fittings shall be compression or capillary fittings to BS864 Part 2 (Metric).

10.04 BRASSWORK:

All Brasswork shall be of the heaviest quality unless otherwise stated.

10.05 FIXING PIPES:

Pipes shall be fixed with suitable clips, saddles or holderbats and surfaces shall be carefully made good.

11.00 PLASTERWORK AND OTHER FINISHES (SEE ALSO SCHEDULE OF WORKS):

11.01 CEMENT:

Cement shall be ordinary Portland Cement and shall comply with BS12 Part 2 M.

11.02 SAND:

The sand renderings and floor screeds shall comply with BS1199, graded as Table 1.

Samples shall be submitted to and be approved by the Architect before finishings are commenced. The sand shall be kept clean and re-washed if necessary.

11.03 WATER:

Water shall be obtained from the mains and shall be kept free from impurities.

11.04 PLASTERBOARD:

The plasterboard shall be obtained from British Gypsum Ltd., and fixed strictly in accordance with the manufacturer's printed instructions.

11.05 METAL LATHING:

Metal lathing shall be tight galvanised steel staples with joints lapped 38mm. and tied with galvanised steel wire. All cut edges and damaged staples etc., shall be treated after erection, with a protective coat of approved bitumen oil paint.

11.06 CEMENT AND SAND SCREEDS:

Cement and sand screeds shall consist of one part of cement to three parts of sand by volume and shall be suitably finished to receive the pavings specified. Those specified to receive thermoplastic tiles, and similar thin coverings shall be brought to a smooth plain surface completely free of all marks, grooves etc.

The Contractor will be held responsible for ensuring that adequate bond is obtained between screeds and concrete beds under, and shall allow for laying the screeds on the beds whilst still green or for carrying out the work in a manner consistent with recognised good practice including thoroughly cleaning and wetting the surfaces to the approval of the Architect.

12.00 GLAZING:

12.01 GLASS:

All glass shall conform to BS952 and be free from bubbles, waivers, scratches or other imperfections.

Sheet glass shall be 'Ordinary Glazing' quality or as specified.

Polished Plate Glass shall be 'Glazing for Glazing' quality and the edges of all plate glass shall be 'blackened'.

12.02 SAMPLES:

Samples of all glass are to be submitted to the Architect if so required.

12.03 PUTTY:

The putty for glazing to wood shall be best quality linseed oil putty to BS544 where for paint finish. Where glazing is to stained timber a compatible glazing mastic is to be used (non-linseed oil).

12.04 GLAZING:

Glazing generally shall be carried out in accordance with BSCP 152 and the recommendations of the glazing compound manufacturers.

All glass described as glazed with putty shall be well bedded, puttied, back puttied and properly front puttied and secured with glazing pins or clips in steel sashes or with sprigs in wood sashes. Finished surfaces of putty are to be true in line with daylight edges of openings and with smooth surfaces sharp mitres and neatly cut in against the glass. Rebates and backs of beads shall be primed before glazing.

All glass described as fixed with beads shall be well bedded in putty/mastic.

All glass shall be carefully cut to the required sizes so that all panes of figured or textured glass are uniform in appearance with the pattern parallel to the edges.

13.00 PAINTING AND DECORATING:

13.01 EMULSIONS, PRIMERS AND PAINTS:

Except where otherwise described all emulsion paints, primers, and oil paints shall be manufactured by Messrs. Dulux, Crown or other approved manufacturers and the preparation of surfaces and application of emulsions, primers and paints shall be executed strictly in accordance with the manufacturer's instructions and specification.

13.02 COLOURS:

All paint colours shall be selected by the Architect/Employer and a schedule will be provided giving details of requirements. For Tendering allow White throughout.

13.03 PERPARATION OF SURFACES:

In addition to the specified processes described below and/or in the manufacturer's instructions and specification all surfaces shall be cleaned free from all dirt, grease, oil, or other deleterious material. No paint shall be applied to damp surfaces nor shall any paintwork be carried out in adverse weather conditions.

a) The preparation of all plastered surfaces shall include the removal of all efflorescence, the making good of defects and the filling of the surface as necessary with an approved filler.

b) The preparation of galvanised steel surfaces to be painted shall include for applying one coat mordant solution.

c) The preparation of surfaces of copper to be painted shall include for thoroughly cleansing off with white spirit, etching thoroughly with wire wool and wiping off with benzine.

d) The preparation of wood surfaces shall include for filling as necessary with an approved lead-paste tinted filler as directed by the Architect and rubbing down and brining to a smooth surface.

e) All coats shall be thoroughly dry before subsequent coats are applied and shall be rubbed down with a fine waterproof glass paper and/or pumice before the next coat is applied.

f) Knotting shall mean the application of two coats of best quality Shellac knotting to BS1336.

g) Stopping shall be with linseed oil putty.

h) All surfaces ready for painting shall be approved by the Architect before work is commenced.

13.04 REMOVAL OF IRONMONGERY, ETC.:

All surface fixed ironmongery, fittings etc., except hinges, shall be removed prior to painting and refixed on completion.

14.00 DRAINAGE:

14.01 PREAMBLES TO OTHER SECTIONS:

The preambles to Excavation and Earthwork, Concrete Work, Brickwork and other relevant Sections shall apply equally to this Section in addition to the following.

14.02 GRANULAR BEDDING, HAUNCHING AND SURROUNDS:

The granular bedding and haunching shall consist of broken stone or gravel passing 13 - 25mm. retained on 5mm. sieve.

The bedding shall be 150mm. thick (measured from the underside of the pipe) and the haunching shall be to half the depth of the pipe for the full width of the trench.

Surrounds shall be extended to a height of 150mm. above the top of the pipe for the full width of the trench.

14.03 PIPES AND FITTINGS:

Drain pipes and fittings for drains shall be vitrified clay with flexible joints as manufactured by the Hepworth Iron Co. Ltd., or other approved manufacturer.

14.04 GULLIES, ETC.:

Gullies, shoes, traps etc., together with their metal gratings, covers, buckets, etc., shall be equal to the articles referred to by figure numbers from the manufacturer's catalogue.

14.05 MANHOLE COVERS AND FRAMES:

Manhole covers and frames shall comply with BS497 or shall be in accordance with the figure numbers quoted from the manufacturer's catalogue

14.06 STEP IRONS:

Step irons shall be galvanised malleable cast-iron which comply with BS1247.

14.07 DRAIN TRENCHES:

Drain trenches shall include for grading and consolidating bottoms to the correct levels, carefully back filling earth to avoid damage to the pipes, well ramming, and removing surplus excavated material from the site and any necessary planking and strutting.

In the event of excavations being made deeper than necessary they shall be filled to the proper level with concrete as described for Beds at the Contractors expense.

Where vegetable soil has been removed it shall be replaced at the top of the trench and properly consolidated.

Trenches shall be left open for the inspection of the Architect and until drains have been satisfactorily tested.

14.08 CONCRETE BEDS, HAUNCHES AND SURROUNDS:

Concrete Beds, Haunchings and Surrounds for drains shall be concrete (1:3:6 - 38mm. aggregate).

Beds shall be a minimum of 150mm. thick below the pipes and shall be 300mm. wider than the external diameter of the pipe and finished to the correct gradients.

After testing, haunchings shall be carried up to half the height of the pipe for the full width of the bed and then sloped tangentially to the pipe on both sides.

Surrounds shall be extended to a height of 150mm. above the top of the pipe for the full width of the bed.

Prices for concrete beds, etc., in trenches shall include for any necessary formwork.

14.09 LAYING DRAINS:

Drains shall be laid in straight lines and to even gradients each pipe being properly boned in.

14.10 JOINTING DRAINS:

Drain pipes with flexible joints shall be jointed in accordance with the manufacturer's instructions.

14.11 PIPES PASSING THROUGH WALLS FROM WITHIN A BUILDING:

Pipes are to be isolated from the wall by being wrapped in glass fibre to allow for slight settlement movements. Spanlight or similar relieving lintels are to be installed above the pipework.

14.12 BENCHING:

Benching in manholes shall be in concrete (1:2:4 - 19m. aggregate) finished to steep falls and channels with cement mortar (1:3) 25mm. thick trowelled smooth with rounded angles.

14.13 BEDDING MANHOLE COVERS AND FRAMERS:

Frames to manhole covers shall be bedded in cement mortar (1:3) and covers in grease and sand.

14.14 TESTING:

All drains and manhole covers shall be tested for water tightness and straightness to the satisfaction and in the presence of the Architect and Local Authority Building Inspector.

15.00 EXTERNAL WORKS:

15.01 PREAMBLES TO OTHER SECTIONS:

The preambles to excavation and earthwork, concrete work, brickwork and other relevant sections shall apply equally to this section.