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ALTERATIONS TO THE MAYOR'S PARLOR AT LISKEARD PUBLIC HALL

For

LISKEARD TOWN COUNCIL

Specification

TENDER ISSUE

Planning Approval ref: n/a
Building regulations Approval ref: n/a



INFORMATIVE

ALL THE WORK IS TO BE OF HIGH QUALITY. THE CONTRACTOR MUST READ ALL OF THIS DOCUMENT AND THE DRAWINGS. ALL THE INFORMATION IS RELEVANT TO THE WORK IN HAND. IF A PARTICULAR PRODUCT IS SPECIFIED THAT IS WHAT IS REQUIRED. ALTERNATIVES USED WILL BE REQUIRED TO BE REMOVED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR MUST ENSURE THAT ALL WORKPEOPLE AND ANY SUBCONTRACTORS CAN DELIVER QUALITY FIRST TIME. SUCH AN APPROACH WILL ENABLE THE WORK TO PROGRESS TO A SATISFACTORY CONCLUSION WITHOUT UNPLEASANTNESS. THE CONTRACTOR HAS A RESPONSIBILITY TO MANAGE ALL SITE WORK IN TERMS OF BOTH QUALITY AND PROGRESS.

PLEASE NOTE THE DEFINITION OF PRACTICAL COMPLETION AND SNAGGING (A31). SNAGGING WILL BE UNDERTAKEN ONLY ON WHOLLY COMPLETED WORK. IT IS NOT WITHIN THE ARCHITECT'S BRIEF TO PRODUCE A LIST OF ITEMS NEEDING COMPLETION FOR THE CONTRACTOR'S OR SUBCONTRACTOR'S CONVENIENCE.

THERE ARE SPECIFIC RESTRICTIONS AGAINST PRICING SPECIFIED AND SCHEDULED ITEMS PROVISIONALLY.



A10 PROJECT PARTICULARS

- 110 THE PROJECT:
Name: Alterations to the Mayor's Parlor
- 120 EMPLOYER (CLIENT):
Liskeard Town Council
- 127 THE PRINCIPAL CONTRACTOR:
The Contractor
- 140 ARCHITECT (hereinafter referred to as 'CA'):
Studio Winter Chartered Architect
The Guildhall, Liskeard, Cornwall PL14 3JE
Tel: 01579 345354
Email: mail@studiowinter.com
- 141 CONTRACT ADMINISTRATOR (hereinafter referred to as 'CA'):
As 140
- 150 QUANTITY SURVEYOR:
As 140

A11 TENDER AND CONTRACT DOCUMENTS

- 110 THE TENDER DRAWINGS are: As per issue schedule
- 120 THE CONTRACT DRAWINGS: to be the same as the tender drawings
- 160 THE PRE-TENDER HEALTH AND SAFETY INFORMATION see Section A34.

A12 THE SITE/EXISTING BUILDINGS

- 110 THE SITE:
The Public Hall, West Street, Liskeard, Cornwall PL14 6BW
- 140 EXISTING MAINS/SERVICES:
Water, gas, telephone & electricity.
- 185 HEALTH AND SAFETY FILE:
There is no current Health & Safety file.
- 210 PARKING & VEHICLE ACCESS:
There are no facilities for on site or off-street parking or skips. There is a public car park further along West Street.
- 220 USE OF THE SITE:
Do not use the site for any purpose other than carrying out the Works.
- 230 SPECIFIC RESTRICTIONS:



240 RISKS TO HEALTH AND SAFETY:

- The nature and condition of the site/building cannot be fully and certainly ascertained before it is opened up. However the following risks are or may be present:
- Bird/Vermin guano & nests
- Hidden services
- Known / hidden / unrecorded asbestos containing materials
 - Employer's personnel access
 - Town Councillor's / Mayor access
 - Public access

See A34

The accuracy and sufficiency of this information is not guaranteed by the Employer or the CA and the Contractor must ascertain for himself any information he may require to ensure the safety of all persons and the Works.

280 SITE VISIT:

Before tendering, ascertain the nature of the site, access thereto and all local conditions and restrictions likely to affect the execution of the Works. Visits may be made by arrangement only giving at least 24hrs notice.

A13 DESCRIPTION OF THE WORK

120 THE WORK:

1. Internal structural & non-structural alterations
2. Alterations to services including changes / upgrade to fire / intruder alarm
3. New ceilings
4. New fire doors
5. Decorations including stripping wallpaper / skimming walls
6. New floor finishes
7. Associated works

140 WORK BY OTHERS CONCURRENT WITH THE CONTRACT is described in section A50 of the tender documents.

150 COMPLETION WORK BY OTHERS:

1. none

A30 TENDERING/SUBLETTING/SUPPLY

MAIN CONTRACT TENDERING

110 SCOPE: These conditions are supplementary to those stated in the invitation to tender and on the Form of Tender.

170 ACCEPTANCE OF TENDER: The Employer and his representatives:



- Offer no guarantee that the lowest or any tender will be recommended for acceptance or accepted.
- Will not be responsible for any cost incurred in the preparation of any tender.

190 PERIOD OF VALIDITY: Tenders must remain open for consideration (unless previously withdrawn) for not less than 6 weeks from the date fixed for the submission or lodgement of tenders. Information on the date for possession/commencement is given in section A20.

PRICING/SUBMISSION OF DOCUMENTS

211 PRELIMINARIES IN THE SPECIFICATION: The Preliminaries/General conditions sections (A10-A55 inclusive) must not be relied on as complying with SMM7.

220 PRICING OF PRELIMINARIES: Preliminary items are noted in the schedules. Include all pricing under the appropriate heading within the schedules.

310 SPECIFICATION WITHOUT QUANTITIES: Where and to the extent that quantities are not included in the specification/schedules, tenders must include for all work shown or described in the tender documents as a whole or clearly apparent as being necessary for the complete and proper execution of the Works.

320 PRICING OF SPECIFICATION: Alterations and qualifications to the specification must not be made without the written consent of the CA. Tenders containing unauthorised alterations or qualifications may be rejected. Costs relating to items in the specification which are not priced will be deemed to have been included elsewhere in the tender.

325 CONTRACTORS PROVISIONAL SUMS: The contractor shall not insert provisional sums in the priced schedules to avoid the need to make an accurate assessment of the cost of any item in the hope that the work will then be undertaken on a daywork basis. The cost of any items not priced accurately will be determined by the Architect irrespective of the contended costs of the Contractor.

330 THE PRICED SPECIFICATION must be submitted within 1 week of request in the format of a completed spreadsheet in paper and digital form.

441 A SCHEDULE OF RATES must be submitted with the tender:

- Craftsman
- Labourer
- Electrician
- Plumber

442 SUPPLY OF PRODUCTS AND MATERIALS: If additional items of materials or products are supplied the contractor shall be allowed a profit percentage of 10% of the discounted invoiced price. The Architect is well aware of the discount rates that prevail, particularly in the plumbing and electrical supply chain.

480 PROGRAMME: The Contractor's proposed programme as specified in Section A32 or a summary thereof showing the sequence and timing of the principal parts of the Works, periods for planning and design and itemising any work which is excluded must be submitted. The main sequence of works must be as follows:



a – as contractor prefers

A31 PROVISION, CONTENT AND USE OF DOCUMENTS

DEFINITIONS AND INTERPRETATIONS

- 120 CA means the person nominated in the Contract as Architect or Contract Administrator or his authorised representative.
- 130 IN WRITING: When required to notify, inform, instruct, agree, confirm, obtain information, obtain approval or obtain instructions do so in writing.
- 140 APPROVAL (and words derived there from) means the approval in writing of the CA unless specified otherwise.
- 150 PRODUCTS means materials (including naturally occurring materials) and goods (including components, equipment and accessories) intended for permanent incorporation in the Works.
- 200 PRACTICAL COMPLETION means that ALL work has been completed satisfactorily and drawings of as installed services have been provided.
- 205 SNAGGING means identifying minor shortcomings in work that is completed fully.
- 210 EQUIVALENT PRODUCTS: Wherever products are specified by proprietary name that is the product that must be used. If an equivalent product is allowed “or equal” will be used in the description.
- 220 REFERENCES TO BSI DOCUMENTS are to the versions and amendments listed in the BS1 Standards Catalogue
- 270 SIZES: Unless otherwise stated:
- Products are specified by their co-ordinating sizes.
- Where cross section dimensions of timber shown on drawings are nominal sizes before any required planning they are described as “ex”, for example, ex 150 x 75mm means taken out of a sawn section 150 x 75mm. Dimensions not noted as “ex” mean actual finished size.
- 280 FIX ONLY: Means all labours in unloading, handling, storing and fixing in position, including use of all plant.
- 290 SUPPLY AND FIX: Unless stated otherwise all items given in the schedule of work and/or on the drawings are to be supplied and fixed complete and left in fully operational condition.

TERMS USED IN REFURBISHMENT / ALTERATION



- 311 REMOVE means disconnect, dismantle as necessary and remove the stated element, work or component and all associated accessories, fastenings, supports, linings and bedding materials, and dispose of unwanted materials. It does not include removing hidden associated pipework, wiring, ductwork or other services.
- 321 KEEP FOR REUSE means:
- During removal prevent damage to the stated components or materials, and clean off bedding and jointing materials.
 - Stack neatly, adequately protect and store until required by the Employer or for use in the Works as instructed.
- 331 REPLACE means:
- Remove the stated existing components, features and finishes.
 - Provide and fit in lieu new components, features or finishes, which, unless specified otherwise, must match those, which have been removed.
 - Make good as necessary.
- 341 REPAIR means carry out local remedial work to components, features and finishes as found in the existing building. Re-secure or refix as necessary and leave in a sound and neat condition. It does not include:
- Replacement of components or parts of components.
 - Redecoration.
- 351 MAKE GOOD means carry out local remedial work to components, features and finishes which have been disturbed by other, previous work under this Contract and leave in a sound and neat condition. It does not include:
- Replacement of components or parts of components.
 - Redecoration.
- The meaning of the term shall not be limited by this definition where used in connection with the defects liability provisions of the Contract.
- 361 EASE means make minor adjustments to moving parts of the stated component to achieve good fit in both open and closed positions and ensure free movement in relation to fixed surrounds. Make good as necessary.
- 371 TO MATCH EXISTING means use products, materials and methods to match closely all visual characteristics and features of the existing work, with joints between existing and new work as inconspicuous as possible, all to approval of appearance.

DOCUMENTS PROVIDED ON BEHALF OF EMPLOYER

- 410 ADDITIONAL COPIES OF DRAWINGS: Two copies of drawings (not counting any certified copy of the Contract Drawings) will be issued to the Contractor free of charge. Additional copies will be issued on request but will be charged to the Contractor.
- 430 ADDITIONAL COPIES OF SPECIFICATION: After execution of the Contract, two copies of the Specification will be issued to the Contractor in accordance with the Contract. Additional copies will be issued on request, if available, but will be charged to the Contractor. The schedules are available as an Excel spreadsheet, the contractor may copy and adapt as necessary.



440 DIMENSIONS: The accuracy of dimensions scaled from the drawings is not guaranteed. Obtain from the CA any dimensions required but not given in figures on the drawings nor calculable from figures on the drawings.

DOCUMENTS PROVIDED BY CONTRACTOR / SUBCONTRACTORS

640 PRODUCTION INFORMATION must be provided by the Contractor/Domestic Subcontractor(s) as follows:

- Catalogue/literature identifying all services equipment such as boilers, controls, TRV's.
- Submit to CA for comment and make any necessary amendments.
- Submit sufficient copies of final version to CA for distribution to all affected parties.

692 AS BUILT DRAWINGS AND INFORMATION must be provided to the CA not less than 2 weeks before the date for Completion as follows:

- Electrical layouts including location of all underground cables.
- New drainage as installed.
- Location of pipework, valves and the like and heating circuit.

700 COMMISSIONING CERTIFICATES: Carry out all testing and commissioning and provide all relevant Commissioning Certificates. The supply of these Certificates is necessary to achieve Practical Completion.

720 MAINTENANCE INSTRUCTIONS AND GUARANTEES: Retain copies delivered with components and equipment (failing which, obtain), register with manufacturer as necessary and hand over to CA on or before Practical Completion.

A32 MANAGEMENT OF THE WORKS

GENERALLY

110 SUPERVISION: Accept responsibility for co-ordination, supervision and administration of the Works, including all subcontracts. Arrange and monitor a programme with each subcontractor, supplier, local authority and statutory undertaker, and obtain and supply information as necessary for co-ordination of the work. Control the work of all workpeople including subcontractors to ensure delivery of quality. As soon as any poor quality work is executed stop the person working and if they are unable to do it right get someone else.

120 INSURANCES: Before starting work on site submit documentary evidence and/or policies and receipts for the insurances required by the Conditions of Contract.

130 INSURANCE CLAIMS: If any event occurs which may give rise to any claim or proceeding in respect of loss or damage to the Works or injury or damage to persons or property arising out of the Works, forthwith give notice in writing to the Employer, the CA and the Insurers. Indemnify the Employer against any loss, which may be caused by failure to give such notice.

140 CLIMATIC CONDITIONS: Keep an accurate record of:



- Daily maximum and minimum air temperatures (including overnight).
- Delays due to adverse weather, including description of the weather, type(s) of work affected and number of hours lost.

150 OWNERSHIP: Materials arising from the alteration work are to become the property of the Contractor except where otherwise stated. Remove from site as work proceeds.

PROGRAMME/PROGRESS

211 PROGRAMME:

- As soon as possible and before starting work on site prepare in an approved form a master programme for the Works, which must make allowance for all:
 - Design and production information provided by the Contractor/Subcontractors/Suppliers, including inspection and checking (see section A31).
 - Planning and mobilisation by the Contractor
 - Work resulting from instructions issued in regard to the expenditure of provisional sums (see section A54)
 - Work by or on behalf of the Employer (see section A50) the nature and scope of which, the relationship with preceding and following work and any relevant limitations are suitably defined in the Contract Documents.
- Where and to the extent that the programme implications for work which is not so defined are impossible to assess the Contractor should exclude it from his programme and confirm this when submitting the programme.
- Submit 4 copies to CA.

A programme must be pinned up on site for all to see.

230 SUBMISSION of programmes will not relieve the Contractor of his responsibility to apply in writing for instructions, drawings, etc. in accordance with the Conditions of Contract.

240 COMMENCEMENT OF WORK: Inform the CA at least 7 working days before the proposed date for commencement of work on site.

250 MONITORING: Record progress on a copy of the programme kept on site. If any circumstances arise which may affect the progress of the Works put forward proposals or take other action as appropriate to minimise any delay and to recover any lost time.

260 CA'S SITE MEETINGS:

- The CA will hold regular site meetings to review progress and other matters arising from the administration of the Contract. Formal meetings will normally be held monthly.
- Attend all meetings and inform subcontractors and suppliers when their presence is required.

270 CONTRACTOR'S SITE MEETINGS: Hold meetings with appropriate subcontractors and suppliers shortly before main site meetings to facilitate accurate reporting of progress.

290 NOTICE OF COMPLETION: Give CA at least 2 weeks notice of the anticipated dates of Practical Completion of the whole or parts of the Works.



- 300 ADVERSE WEATHER: Use all reasonable and suitable building aids and methods to prevent or minimise delays during adverse weather conditions.
- 310 EXTENSIONS OF TIME: When a notice of the cause of any delay or likely delay in the progress of the Works is given under the Contract, written notice must also be given of all other causes which apply concurrently. The Contractor shall, as soon as possible, submit to the CA:
- Relevant particulars of the expected effects, if appropriate related to the concurrent causes,
 - An estimate of the extent, if any, of the expected delay in the completion of the Works beyond the Date for Completion, and
 - All other relevant information required by the CA.
- 320 DISTURBANCE OF REGULAR PROGRESS: Any application under Contract in respect of direct loss and/or expense must be made as soon as practicable and with (or to be followed by) the requisite supporting information so as to afford the CA the opportunity to issue instructions designed (according to the circumstances) to minimise or avoid that loss and/or expense.

CONTROL OF COST

- 410 CASH FLOW FORECAST: As soon as possible and before starting work on site submit to the CA a forecast showing the gross valuation of the Works at the date of each Interim Certificate throughout the Contract period and based upon the programme for the Works.
- 432 PROPOSED INSTRUCTIONS: If the CA issues details of a proposed instruction with a request for an estimate of cost, submit such an estimate without delay and in any case within 7 days. The estimate must include:
- A detailed breakdown of the cost including any allowance for direct loss and expense.
 - Details of any additional resources, which may be required.
 - Details of any adjustments, which may have to be made to the programme for the Works.
 - Any other information as is reasonably necessary for the CA to fully assess the implications of issuing such an instruction.
- Inform the CA immediately if it is not possible to comply with any of the above requirements.
- 440 MEASUREMENTS: Give reasonable notice to CA before covering up work which the CA requires to be measured.
- 450 DAYWORK VOUCHERS: Give reasonable notice to the CA of the commencement of any work for which daywork vouchers are to be submitted. Before being delivered each voucher must be:
- Referenced to the instruction under which the work is authorised, and
 - Signed by the person in charge as evidence that the workmen's names, the time spent by each, the plant and materials shown are correct.



- 460 INTERIM VALUATIONS: At least 5 days before the end of each established period for interim valuations submit to the CA details of amounts due under the Contract together with all necessary supporting information. The CA's decision as to valuation amount will be final.
- 471 UNFIXED MATERIALS: At the time of each valuation disclose to the CA which of the unfixed materials and goods on site are free from, and which are subject to, any reservation of title inconsistent with passing of property as required by Clauses the Conditions of Contract, together with their respective values. When requested provide evidence of freedom from reservation of title. Any goods that are valued are deemed to be in perfect condition and become the property of the Employer.

A33 QUALITY STANDARDS / CONTROL

MATERIALS AND WORK GENERALLY

- 110 GOOD PRACTICE: Where and to the extent that materials, products and workmanship are not fully detailed or specified they are to be:
- Of a standard appropriate to the Works and suitable for the functions stated in or reasonably to be inferred from the project documents, and
 - In accordance with good building practice.
- 120 GENERAL QUALITY OF PRODUCTS:
- Products to be new unless otherwise specified.
 - For products specified to a British or European Standard obtain certificates of compliance from manufacturers when requested by CA.
 - Where a choice of manufacturer or source of supply is allowed for any particular product, the whole quantity required to complete the work must be of the same type, manufacture and/or source unless otherwise approved. Produce written evidence of sources of supply when requested by CA.
 - Ensure that the whole quantity of each product required to complete the work is of consistent kind, size, quality and overall appearance.
 - Where consistency of appearance is desirable ensure consistency of supply from the same source. Unless otherwise approved do not use different colour batches where they can be seen together.
 - If products are prone to deterioration or have a limited shelf life, order in suitable quantities to a programme and use in appropriate sequence. Do not use if there are any signs of deterioration, setting or other unsatisfactory condition.
- 130 PROPRIETARY PRODUCTS:
- Handle, store, prepare and use or fix each product in accordance with its manufacturer's current printed or written recommendations/instructions. Inform CA if these conflict with any other specified requirement. Submit copies to CA when requested.
 - The tender will be deemed to be based on the products specified and recommendations on their use as described in the manufacturers' literature current at January 2004.
 - Obtain confirmation from manufacturers that the products specified and recommendations on their use have not been changed since that time. Where such change has occurred, inform CA and do not place orders for or use the affected products without further instructions.



- Where British Board of Agrément certified products are used, comply with the limitations, recommendations and requirements of the relevant valid certificates.
- 180 BS 8000: BASIC WORKMANSHIP:
- The standard of workmanship required is high. Where compliance with BS 8000 is specified, this is only to the extent that the recommendations therein define the quality of the finished work.
 - Where BS 8000 gives recommendations on particular working methods or other matters which are properly within the province and responsibility of the Contractor, compliance therewith will be deemed to be a matter of general industry good practice and not a specific requirement of the CA under the Contract.
 - If there is any conflict or discrepancy between the recommendations of BS 8000 on the one hand and the project documents on the other, the latter will prevail.
- 190 WATER FOR THE WORKS: Available without charge.

A34 SECURITY / SAFETY / PROTECTION

GENERALLY

- 114 CONSTRUCTION HAZARDS arising from the design of the project include those identified below. Commonplace hazards which good management should control and good site practices are not listed.
- Hazard: Bird/bat/vermin guano & nests.
 - Access to site to be prohibited at all times.
 - Vehicles & Access: Highway & footpath access.
 - Hidden services
 - Known / hidden / unrecorded asbestos containing materials
 - Employer's personnel access
 - Town Councillor's / Mayor access
 - Public access
- 125 HSE APPROVED CODES OF PRACTICE: Comply with the following:
- Management of health and safety at work.
 - Managing construction for health and safety.
- 130 SECURITY:
- Adequately safeguard the site, the Works, products, materials, plant, and any existing buildings affected by the Works from damage and theft. Take all reasonable precautions to prevent unauthorised access to the site, the Works and adjoining property.
- 150 OCCUPIED PREMISES:
1. The Employer will occupy the adjacent buildings & access to them for pedestrians & vehicles needs to be maintained throughout the works.



PROTECT AGAINST THE FOLLOWING:

221 NOISE:

- Comply generally with BS 5228.
- Fit all compressors, percussion tools and vehicles with effective silencers of a type recommended by manufacturers of the compressors, tools or vehicles.
- Do not use pneumatic drills and other noisy appliances during without consent of the CA.
- Do not use or permit employees to use radios or other audio equipment in ways or at times which may cause nuisance.

230 POLLUTION: Take all reasonable precautions to prevent pollution of the site, the Works and the general environment including streams and waterways. If pollution occurs, inform the appropriate Authorities and the CA without delay and provide them with all relevant information.

240 NUISANCE: Take all necessary precautions to prevent nuisance from smoke, dust, rubbish, vermin and other causes.

260 FIRE: Take all necessary precautions to prevent personal injury, death, and damage to the Works or other property from fire. Comply with Joint Code of Practice 'Fire Prevention on Construction Sites' published by the Building Employers Confederation, the Loss Prevention Council and the National Contractors' Group.

263 FIRE:

- Smoking will not be permitted in any part of building.

270 WATER:

- Prevent damage from storm and surface water. (Items for keeping the site and excavations free of water are given elsewhere).

280 MOISTURE:

- Prevent the work from becoming wet or damp where this may cause damage. Dry out the Works thoroughly. Control the drying out and humidity of the Works and the application of heat to prevent:
 - Blistering and failure of adhesion.
 - Damage due to trapped moisture.
 - Excessive movement.

290 WASTE:

- Remove rubbish, debris, surplus material and spoil regularly and keep the site and Works clean and tidy.
- Remove all rubbish, dirt and residues from voids and cavities in the construction before closing in.
- Ensure that non-hazardous material is disposed of at a tip approved by a Waste Regulation Authority.
- Remove all surplus hazardous materials and their containers regularly for disposal off site in a safe and competent manner as approved by a Waste Regulation Authority and in accordance with relevant regulations.
- Retain waste transfer documentation on site.



PROTECT THE FOLLOWING:

410 WORK IN ALL SECTIONS:

- Adequately protect all types of work and all parts of the Works, including work carried out by others, throughout the Contract. Wherever work is of an especially vulnerable nature or is exposed to abnormal risks provide special protection to ensure that damage does not occur.

420 EXISTING SERVICES:

- Notify all service authorities and/or adjacent owners of the proposed works not less than one week before commencing site operations.
- Before starting work check positions of existing mains/services. Where positions are not shown on drawings obtain relevant details from service authorities or other owners.
- Observe service authority's recommendations for work adjacent to existing services.
- Adequately protect, and prevent damage to all services. Do not interfere with their operation without consent of the service authorities or other owners.
- If any damage to services results from the execution of the Works, notify CA and appropriate service authority without delay. Make arrangements for the work to be made good without delay to the satisfaction of the service authority or other owner as appropriate. Any measures taken by the CA to deal with an emergency will not affect the extent of the Contractor's liability.
- Replace any marker tapes or protective covers disturbed during site operations to the service authority's recommendations.

430 HIGHWAY/DRIVES AND FOOTPATHS:

- Adequately maintain roads and footpaths within and adjacent to the site and keep clear of mud and debris. Any damage to roads and footpaths caused by site traffic or otherwise consequent upon the Works must be made good to the satisfaction of CA. Bear any costs arising.

450 EXISTING FEATURES:

- Prevent damage to existing buildings, fences, gates, walls, roads, paved areas or lawns and other site features during the execution of the Works.

481 ADJOINING PROPERTY:

- Eliminate nuisance by limiting access of workpeople.

A35 SPECIFIC LIMITATIONS ON METHOD / SEQUENCE / TIMING

110 SCOPE:

- The limitations described in this section are supplementary to limitations described or implicit in information given in other sections or on the drawings.

130 METHOD/SEQUENCE OF WORK:

- Works sequence to be as follows:
As the contractor prefers



- 140 ACCESS TO THE SITE: See section A12.
- 150 USE OF THE SITE: See section A12.
- 170 USE OR DISPOSAL OF MATERIALS:
Excavated material to be disposed of off-site.
- 180 START OF WORK:
To be agreed
- 190 WORKING HOURS:
08.00hrs. - 18.00hrs. Monday - Saturday

A36 FACILITIES / TEMPORARY WORK / SERVICES

- 110 LOCATIONS: Inform CA of the intended siting of all spoil heaps, temporary works and services.
- 120 MAINTAIN, alter, adapt and move temporary works and services as necessary. Remove when no longer required and make good.
- 261 SANITARY ACCOMMODATION: Use the Employer's facilities (agreed locations only).
- 441 TELEPHONES: Provide as soon as practicable after the Date of Possession a temporary on site telephone installation for use by the Contractor and Subcontractors, and pay all charges. Make arrangements to ensure that incoming calls are answered reasonably promptly.
- 500 METER READINGS: The Contractor will take electricity, gas and water readings before works commence, thereafter-reasonable use will be allowed. If misuse occurs a charge will be made to the contractor.

A37 OPERATION/MAINTENANCE OF THE FINISHED BUILDING

- 113 THE BUILDING FILE is an information source and guide for the Employer providing an understanding of the building and its systems and enabling it to be operated and maintained safely. Provide CA with 2 copies of the information required below not less than one week before Practical Completion.
- A full description of each of the building services systems installed, written to ensure that the Employer fully understands the scope and facilities provided.
 - Operating and maintenance instructions for all equipment and systems installed.
 - Copies of manufacturers current technical literature and COSHH dated data sheets for all materials, plant and equipment selected by the Contractor.
 - General maintenance instructions for all items of Contractor designed or performance specified work.
- 220 TRAINING: Before Practical Completion explain and demonstrate to the Employer the purpose, function and operation of the installations.



A40 CONTRACTOR'S GENERAL COST ITEMS: MANAGEMENT AND STAFF

110 MANAGEMENT AND STAFF

A41 CONTRACTOR'S GENERAL COST ITEMS: SITE ACCOMMODATION

For details of site accommodation required or made/not made available by the Employer see section A36.

110 SITE ACCOMMODATION

A42 CONTRACTOR'S GENERAL COST ITEMS: SERVICES AND FACILITIES

For details of services and facilities required or not made available by the Employer see section A36.

150 TELEPHONE AND ADMINISTRATION

160 SAFETY, HEALTH AND WELFARE (see A34/170)

170 STORAGE OF MATERIALS (see A33/150)

180 RUBBISH DISPOSAL (see A34/290)

210 PROTECTION OF WORK IN ALL SECTIONS (see A34/410 et seq)

220 SECURITY (see A34/130)

230 MAINTAIN PRIVATE ROADS AND FEATURES (see A34/430)

240 SMALL PLANT AND TOOLS

A43 CONTRACTOR'S GENERAL COST ITEMS: MECHANICAL PLANT

200 GENERAL PLANT

A44 CONTRACTOR'S GENERAL COST ITEMS: TEMPORARY WORKS

For details of temporary works required or made/not made available by the Employer see section A36.

100 TEMPORARY WORKS

A54 PROVISIONAL WORK / ITEMS

See list in construction notes.



GENERAL WORKS SECTIONS

C10 DEMOLISHING STRUCTURES

GENERAL REQUIREMENTS

130 GROUNDWORKS: Grub up existing drain runs for new connections / runs.

SERVICES AFFECTED BY

210 SERVICES REGULATIONS: Any work carried out to or which affects new or existing services must be in accordance with the byelaws or regulations of the relevant statutory authority.

220 LOCATION OF SERVICES: Locate and mark the positions of services affected by the work. Arrange with the appropriate authorities for the location and marking of the positions of mains services. Arrange for utilities companies to effect alterations to supplies where necessary (see prov sums).

230 DISCONNECTION OF SERVICES: Before starting demolition arrange with the appropriate authorities for the disconnection of services and removal of fittings and equipment.

240 DISCONNECTION OF DRAINS: Locate and disconnect all disused drain connections. Seal within the site to approval.

DEMOLITION WORK

310 WORKMANSHIP GENERALLY:

- Demolish structure(s) in accordance with BS 6187 and Health and Safety Executive Guidance Notes GS29/1, 3 and 4.
- Operatives must be appropriately skilled and experienced for the type of work.

340 HEALTH HAZARDS: Take adequate precautions to protect site operatives and the general public from health hazards associated with the works. In particular, removal of asbestos cement products.

391 ADDITIONAL ASBESTOS BASED MATERIALS: Report immediately to the CA any suspected asbestos based materials discovered during demolition work. Avoid disturbing such materials. Agree with the CA methods for safe removal.

410 UNKNOWN HAZARDS: Inform the CA of any unrecorded voids, tanks, chemicals, etc. discovered during demolition work. Agree with the CA, methods for safe removal, filling, etc.

440 COMPLETION: Clear away all debris and leave the site in a tidy condition on completion.

MATERIALS ARISING

511 OWNERSHIP: The following components and materials are to remain the property of the Employer and shall be set aside for future use:



- Sanitaryware
Carefully remove and store on site where directed.

520 **HARDCORE:** No demolition materials arising are suitable for hardcore. Remove materials from site.

G20 CARPENTRY & GENERAL FRAMING

To be read with Preliminaries/General conditions.

GENERAL

105 **TIMBER PROCUREMENT**

- Timber (including timber for wood based products): Obtained from well managed forests/ plantations in accordance with:
 - The laws governing forest management in the producer country or countries.
 - International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
- Documentation: Provide either:
 - Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied, or
 - Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood based products.

150 **STRENGTH GRADING OF TIMBER**

- Grader: A company currently registered under a third party quality assurance scheme operated by a certification body approved by the UK Timber Grading Committee.

160 **GRADING AND MARKING OF SOFTWOOD**

- Timber of a target/ finished thickness less than 100 mm and not specified for wet exposure: Graded at an average moisture content not exceeding 20% with no reading being in excess of 24% and clearly marked as 'DRY' or 'KD' (kiln dried).
- Timber graded undried (green) and specified for installation at higher moisture contents: Clearly marked as 'WET' or 'GRN'.
- Structural timber members cut from large graded sections: Regraded to approval and marked accordingly.

TYPE(S) OF TIMBER

210 **GRADED SOFTWOOD FOR GENERAL STRUCTURAL WORK**

- Stress graded to BS 4978 or other national equivalent and so marked.
Strength class to BS 5268:Part 2: C 24
Surface finish: Sawn for general structural joists.
- Preservative Treatment: As section Z12 and British Wood Preserving and Damp-Proofing Association Commodity Specification C 8
Type/desired service life: 40 yr



215 IROKO FOR EXTERNAL JOINERY

Carefully select Iroko, match sections, cut from site dimensions, machine to take glazing as supplier standard details.

270 UNGRADED SOFTWOOD FOR FRAMING TO BATTENING TO WALL LININGS, AND OTHER GENERAL FRAMING.

- Quality of timber: Free from decay, insect attack (except pinhole borers) and with no knots wider than half the width of the section.
- Surface finish: Sawn.
- Treatment: As section Z12 and Wood Protection Association Commodity Specification C8, Service life: 30 years.

275 WOOD TRIM TO FASCIA BOARDS, DECORATIVE BRACKETS / FRIEZE.

- Species: Contractor's choice.
- Standard: To BS 1186-3.
 - Class: 2.
- Treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8, Service life: 30 years.
- Fixing: 2 no. 50mm lost head nails to each support.
- Other requirements: None.

311 PLYWOOD

(Note: Stirling board will not be used anywhere.) - Manufactured to an approved national standard.

Appearance grade: II
Bond type: WBP to BS 6566:Part 8 or equivalent.
Nominal thickness: as drawings.

Brush treat with preservative.

312 NONSTRUCTURAL PLYWOOD TO VALLEY GUTTERS TO ROOF.

- Standard: To an approved national standard.
- Thickness: As indicated on drawings.
- Appearance class to BS EN 635: IV.
- Bond quality to BS EN 314-2: Class 2 .
- Finish: Unsanded.
- Treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8, Service life: 30 years.

WORKMANSHIP GENERALLY

401 CROSS SECTION DIMENSIONS OF STRUCTURAL SOFTWOOD AND HARDWOOD

- Dimensions: Dimensions in this specification and shown on drawings are target sizes as defined in BS EN 336.
- Tolerances: The tolerance indicators (T1) and (T2) specify the maximum permitted deviations from target sizes as stated in BS EN 336, clause 4.3:
 - Tolerance class 1 (T1) for sawn surfaces.
 - Tolerance class 2 (T2) for further processed surfaces.

402 CROSS SECTION DIMENSIONS OF NONSTRUCTURAL SOFTWOOD

- Dimensions: Dimensions in this specification and shown on drawings are finished sizes.



- Maximum permitted deviations from finished sizes: As stated in BS EN 1313-1:
 - Clause 6 for sawn sections.
 - Clause NA.2 for further processed sections.

- 403 CROSS SECTION DIMENSIONS OF NONSTRUCTURAL HARDWOOD
 - Dimensions: Dimensions in this specification and shown on drawings are finished sizes.
 - Maximum permitted deviations from finished sizes: As stated in BS EN 1313-2:
 - Clause 6 for sawn sections.
 - Clause NA.3 for further processed sections.

- 420 WARPING OF TIMBER
 - Bow, spring, twist and cup: Not greater than the limits set down in BS 4978 or BS EN 14081-1 for softwood, or BS 5756 for hardwood.

- 430 SELECTION AND USE OF TIMBER:
 - Do not use timber members which are damaged, crushed or split beyond the limits permitted by their grading.
 - Ensure that notches and holes are not so positioned in relation to knots or other defects that the strength of members will be reduced.
 - Do not use scarf joints, finger joints or splice plates without approval.

- 440 PROCESSING TREATED TIMBER:
 - Carry out as much cutting and machining as possible before treatment. All in the case of PAR sections.
 - Retreat all treated timber which is sawn along the length, ploughed, thickened, planed or otherwise extensively processed.
 - Treat timber surfaces exposed by minor cutting and drilling with two flood coats of a solution recommended for the purpose by main treatment solution manufacturer.

- 450 MOISTURE CONTENT of timber at time of erection to be not more than:
 - Under cover in generally unheated spaces: 24%
 - Under cover in generally heated spaces: 20%
 - Internal in continuously heated spaces: 20%

- 510 PROTECTION:
 - Keep timber dry and do not overstress, distort or disfigure sections or components during transit, storage, lifting, erection or fixing.
 - Store timber and components under cover, clear of the ground and with good ventilation. Support on regularly spaced, level bearers on a dry, firm base. Open pile to ensure free movement of air through the stack.
 - Arrange sequence of construction and cover timber as necessary during and after erection to ensure that specified moisture content is not exceeded.
 - Keep trussed rafters vertical during handling and storage.

- 530 PAINTED FINISHES
 - Structural timber to be painted: Primed as specified before delivery to site.



- 540 CLEAR FINISHES
- Structural timber to be clear finished: Keep clean and apply first coat of specified finish before delivery to site.
- 550 EXPOSED TIMBER: Prevent damage to and marking of surfaces and arrises of planed structural timber which will be exposed to view in completed work.

JOINTING TIMBER

- 570 JOINTING/ FIXING GENERALLY
- Generally: Where not specified precisely, select methods of jointing and fixing and types, sizes and spacings of fasteners in compliance with section Z20.
- 630 BOLTED JOINTS TO TRUSSES
- Locate holes accurately and drill to diameters as close as practical to the nominal bolt diameter and not more than 2mm larger.
 - Tighten bolts so that washers just bite the surface of the timber and at least one complete thread protrudes from the nut.
 - Check at agreed regular intervals up to Practical Completion and tighten as necessary to prevent slackening of joints.
- 670 ANTICORROSION FINISHES FOR FASTENERS
- Galvanizing: To BS 7371-6, with internal threads tapped and lightly oiled following treatment.
 - Sherardizing: To BS 7371-8, Class 1.
 - Zinc plating: To BS EN ISO 4042 and passivated.

ERECTION AND INSTALLATION

- 760 TEMPORARY BRACING
- Provision: As necessary to maintain structural timber components in position and to ensure complete stability during construction.
- 770 ADDITIONAL SUPPORTS:
- Where not shown on drawings, position and fix additional studs, noggings or battens for appliances, fixtures, edges of sheets, etc., in accordance with manufacturers' recommendations.
 - All additional studs, noggings or battens to be of adequate size and have the same treatment, if any, as adjacent timber supports.
- 780 WALL PLATES: Ensure that wall plates are:
- Positioned and aligned to give the correct span and level for trusses, joists, etc.
 - Fully bedded in fresh mortar.
 - In lengths of not less than 3m with half lap joints.
- 784 INSTALLING JOISTS GENERALLY:
- Position at equal centres not exceeding designed spacing and true to level.
 - Install bowed joists with positive camber.
 - Position end joists approximately 50mm from masonry walls.



- 786 INSTALLING JOISTS ON HANGERS:
- Bed hangers directly on and hard against supporting construction. Do not use packs or bed on mortar.
 - Cut joists to leave not more than 6mm gap between ends of joists and back of hanger.
 - Rebate joists to lie flush with underside of hangers.
 - Fix joists to hangers with a nail in every hole.

791 JOIST HANGERS

Material/finish: galv steel

Size: To suit joist, design load and crushing strength of supporting construction.

- 795 TRIMMING OPENINGS: When not specified otherwise, trimmers and trimming joists to be not less than 25mm wider than general joists.

840 STRUTTING:

- Unless specified otherwise, securely fix solid blocking between joists as follows:
 - Joist spans Two staggered rows equally spaced.
- Outer joists to be blocked solidly to perimeter walls.

K10 PLASTERBOARD DRY LININGS / PARTITIONS / CEILINGS

To be read with Preliminaries/General conditions.

TYPE(S) OF DRY LINING

245 CEILING LINING ON TIMBER GENERALLY

- Background: Timber joists at 400c/s, nogg as necessary
- Lining: Wall board 12.5mm
- Fixing: As clause 610, using plasterboard screws
- Acoustic sealant: As clause 515.
- Finishing: skim finish

INSTALLATION

335 ADDITIONAL SUPPORTS

- Framing: Accurately position and securely fix to give full support to:
 - Partition heads running parallel with, but offset from main structural supports.
 - Fixtures, fittings and service outlets. Mark framing positions clearly and accurately on linings.
 - Board edges and lining perimeters, as recommended by board manufacturer to suit type and performance of lining.

375 NEW WET LAID BASES



- Dpcs: Install under full width of partitions/ freestanding wall linings.
 - Material: Bituminous sheet or plastics.
- 435 DRY LININGS GENERALLY
- General: Use fixing, jointing, sealing and finishing materials, components and installation methods recommended by board manufacturer.
 - Cutting plasterboards: Neatly and accurately without damaging core or tearing paper facing.
 - Cut edges: Minimize and position at internal angles wherever possible. Mask with bound edges of adjacent boards at external corners.
 - Fixings boards: Securely and firmly to suitably prepared and accurately levelled backgrounds.
 - Finishing: Neatly to give flush, smooth, flat surfaces free from bowing and abrupt changes of level.
- 445 CEILINGS
- Sequence: Fix boards to ceilings before installing dry lined walls and partitions.
 - Orientation of boards: Fix with bound edges at right angles to supports and with ends staggered in adjacent rows.
 - Two layer boarding: Stagger joints between layers.
- 510 SEALING GAPS AND AIR PATHS
- Location of sealant: To perimeter abutments and around openings.
 - Pressurized shafts and ducts: At board-to-board and board-to-metal frame junctions.
 - Application: To clean, dry and dust free surfaces as a continuous bead with no gaps.
 - Gaps greater than 6 mm between floor and underside of plasterboard: After sealing, fill with jointing compound.
- 560 JOINTS BETWEEN BOARDS
- Tapered edged plasterboards:
 - Bound edges: Lightly butted.
 - Cut/ unbound edges: 3 mm gap.
 - Square edged plasterboards: 3 mm gap.
 - Square edged fibre reinforced gypsum boards: 5 mm gap.
- 565 VERTICAL JOINTS
- Joints: Centre on studs.
 - Partitions: Stagger joints on opposite sides of studs.
 - Two layer boarding: Stagger joints between layers.
- 570 HORIZONTAL JOINTS
- Surfaces exposed to view: Horizontal joints not permitted. Seek instructions where height of partition/ lining exceeds maximum available length of board.
 - Two layer boarding: Stagger joints between layers by at least 600 mm.
 - Edges of boards: Support using additional framing.
 - Two layer boarding: Support edges of outer layer.
- 610 FIXING PLASTERBOARD TO TIMBER



- Fixing to timber: Securely at the following centres (maximum):
 - Screws to partitions/ wall linings: 150 mm.
 - Screws to ceilings: 150 mm.
- Position of nails/ screws from edges of boards (minimum):
 - Bound edges: 10 mm.
 - Cut/ unbound edges: 13 mm.
- Position of nails/ screws from edges of timber supports (minimum): 6 mm.

FINISHING

650 LEVEL OF DRY LINING ACROSS JOINTS

- Sudden irregularities: Not permitted.
- Joint deviations: Measure from faces of adjacent boards using methods and straightedges (450 mm long with feet/ pads) to BS 8212, clause 3.3.5.
 - Tapered edge joints:
Permissible deviation (maximum) across joints when measured with feet resting on boards: 3 mm.
 - External angles:
Permissible deviation (maximum) for both faces: 4 mm.
 - Internal angles:
Permissible deviation (maximum) for both faces: 5 mm.

670 SEAMLESS JOINTING TO PLASTERBOARDS

- Cut edges of boards: Lightly sand to remove paper burrs.
- Filling and taping: Fill joints, gaps and internal angles with jointing compound and cover with continuous lengths of paper tape, fully bedded.
- Protection of edges/ corners: Reinforce external angles, stop ends, etc. with specified edge/ angle bead.
- Finishing: Apply jointing compound. Feather out each application beyond previous application to give a flush, smooth, seamless surface.
- Nail/ screw depressions: Fill with jointing compound to give a flush surface.
- Minor imperfections: Remove by light sanding.

680 SKIM COAT PLASTER FINISH

- Plaster type: Gypsum.
 - Thickness: 2-3 mm.
- Joints: Fill and tape except where coincident with metal beads.
- Finish: Tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.

695 INSTALLING BEADS/ STOPS

- Cutting: Neatly using mitres at return angles.
- Fixing: Securely using longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with substrate.
- Finishing: After joint compounds/ plasters have been applied, remove surplus material while still wet from surfaces of beads exposed to view.



GENERALLY / PREPARATION

- 345 ADDITIONAL SUPPORTS FOR PARTITION HEADS: Provide or ensure provision of accurately positioned and securely fixed framing to receive partition heads running parallel with, but offset from main structural supports.
- 355 ADDITIONAL SUPPORTS FOR FIXTURES AND FITTINGS: Provide or ensure provision of accurately positioned and securely fixed framing to support fixtures, fittings and services. After fixing boards, mark positions of framing for following trades.
- 365 ADDITIONAL SUPPORTS FOR BOARD EDGES AND PERIMETERS:
Provide or ensure provision of additional framing, accurately positioned and securely fixed, to give full support to board edges and lining perimeters in accordance with board manufacturer's recommendations.
- 375 NEW WET LAID BASES: Provide or ensure provision of a continuous strip of bituminous felt dpc or other approved material under partitions/free standing wall linings, cut to the full width of the partition/lining.
- 405 PLASTERBOARD GENERALLY: To BS 1230:Part 1, types 1 to 5 with exposed surface and edge profiles suitable to receive the specified finish.
- 560 JOINTS BETWEEN BOARDS:
- Tapered edged plasterboards: Lightly butted. Leave a 3mm gap where cut/unbound edges occur.
- Square edged plasterboards to be finished with textured plastic compound: 3mm gap.
- Square edged fibre reinforced gypsum boards: 5mm gap.
- 565 VERTICAL JOINTS:
- Centre joints on studs. For partitions, ensure that joints on opposite sides of studs are staggered.
- For two layer boarding, stagger joints between layers.
- 610 FIXING PLASTERBOARD TO TIMBER SUPPORTS:
- Fix securely to all supports working from the centre of each board using the specified method of fixing at the following maximum centres:
Nails: 150mm centres.
Drywall screws: 300mm centres for partitions/wall linings (reduced to 200mm at external angles where recommended by the board manufacturer) and 230mm centres for ceilings.
- Position fixings not less than 10mm from bound edges, 13mm from cut/unbound edges and not less than 6mm from the edge of the timber support.
- Type and length of fixings as recommended in BS 8212, section 2.2.3, unless specified otherwise.
- 680 SKIM COAT PLASTER FINISH:
- Manufacturer and reference: Gyproc
Thickness: 2-3mm.
- Fill and tape all joints except where coincident with metal beads.



- Trowel/float to a tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.

K20 TIMBER BOARD FLOORING / SARKING / LININGS / CASINGS

TYPE(S) OF FLOORING / SARKING / LINING / CASING

110 TIMBER BOARD TO VARIOUS CASINGS

- Base: 50 x 50mm sw framing
- Boards: SEASONED SW 20 thick x 150mm wide square edge.

-Moisture content at time of fixing: Not exceeding 19%.

-Fixing: Secret nailed

-Jointing, glued tongue

WORKMANSHIP

710 INSTALLATION GENERALLY:

- In the absence of manufacturers recommendations store, prepare and fix sheets in accordance with the recommendations of the relevant trade association.
- Keep sheets dry and do not fix to timber supports which have a moisture content greater than 18%.
- Do not fix sheets internally until the building is weathertight.
- Set out sheets with joints accurately aligned, of constant width and parallel to perimeter edges.
- Methods of fixing and fastenings to be as section Z20 unless specified otherwise.
- Protect sheets from dirt, stains and damage until Practical Completion.

730 ADDITIONAL SUPPORTS: Where specified ensure that studs, noggings or battens as specified in clause G20/770 and not less than 50 mm wide are provided as follows:

- Tongue and groove jointed rigid sheet areas: To all unsupported perimeter edges.
- Butt jointed rigid sheet areas: To all unsupported sheet edges.

780 ACCESS PANELS: Agree size and position with CA before sheets are fixed. Provide additional noggings, battens, etc., as necessary.

L20 DOORS / SHUTTERS / HATCHES

PRELIMINARY INFORMATION /REQUIREMENTS

To be read with Preliminaries/ General conditions.

GENERAL

110 EVIDENCE OF PERFORMANCE



- Certification: Provide independently certified evidence that all incorporated components comply with specified performance requirements.
- 115 FIRE RESISTING DOORS/ DOORSETS/ ASSEMBLIES
- Evidence of fire performance: Provide certified evidence, in the form of a product conformity certificate, directly relevant fire test report or engineering assessment, that each door/ doorset/ assembly supplied will comply with the specified requirements for fire resistance if tested to BS 476-22, BS EN 1634-1 or BS EN 1634-3. Such certification must cover door and frame materials, glass and glazing materials and their installation, essential and ancillary ironmongery, hinges and seals.
- 150 SITE DIMENSIONS must be taken and recorded on shop drawings before starting to make external doors and all to suit existing openings

INSTALLATION

- 710 PROTECTION OF COMPONENTS: Do not deliver to site components which cannot be put immediately into suitable dry, floored and covered storage. Stack on bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.
- 720 MOISTURE CONTENT: During delivery, storage, fixing and thereafter to Practical Completion maintain conditions of temperature and humidity to suit specified moisture content(s) of timber components. When instructed by CA, test components with an approved electrical moisture meter used in accordance with manufacturer's recommendations.
- 730 PRIMING/SEALING: Before fixing components ensure that surfaces of timber which will be inaccessible after installation are primed or sealed as specified.
- 740 CORROSION PROTECTION: Before fixing, apply two coats of bitumen solution to BS 6949 or an approved mastic impregnated tape, to surfaces of components which will corrode when in contact with the adjacent surface.
- 760 BUILDING IN will not be permitted except where specifically stated.
- 790 FIXING CENTRES FOR TIMBER FRAMES: When not pre drilled or specified otherwise, position fixings 150mm from each end of jamb, adjacent to each hanging point and at 600mm maximum centres.
- 810 FIRE RESISTING FRAMES: Completely fill gap between
frame and wall with intumescent putty
- 830 IRONMONGERY: Assemble and fix carefully and accurately using fastenings with matching finish supplied by ironmongery manufacturer. Prevent damage to ironmongery and adjacent surfaces. At completion check, adjust and lubricate as necessary to ensure correct functioning.
- 830 FIXING IRONMONGERY GENERALLY
- Fasteners: Supplied by ironmongery manufacturer.
 - Finish/ Corrosion resistance: To match ironmongery.



- Holes for components: No larger than required for satisfactory fit/operation.
- Adjacent surfaces: Undamaged.
- Moving parts: Adjusted, lubricated and functioning correctly at completion.

840 FIXING IRONMONGERY TO FIRE RESISTING DOOR ASSEMBLIES

- General: All items fixed in accordance with door leaf manufacturer's recommendations ensuring that integrity of the assembly, as established by testing, is not compromised.
- Holes for through fixings and components: Accurately cut.
 - Clearances: Not more than 8 mm unless protected by intumescent paste or similar.
- Lock/ Latch cases for fire 120 doors requiring ≥ 120 minutes integrity performance: Coated with intumescent paint or paste before installation.

851 LOCATION OF HINGES TO DOORS OTHER THAN ALUMINIUM ONES.

- Primary hinges: Where not specified otherwise, positioned with centre lines 250 mm from top and bottom of door leaf.
- Third hinge: Where specified, positioned in centre of door leaf vertically.
- Hinges for fire resisting doors: Positioned in accordance with door leaf manufacturer's recommendations.

L40 GENERAL GLAZING

To be read with Preliminaries/General conditions.

150 WORKMANSHIP GENERALLY

- Glazing generally: To BS 6262.
- Integrity: Glazing must be wind and watertight under all conditions with full allowance made for deflections and other movements.
- Dimensional tolerances: Panes/ sheets to be within ± 2 mm of specified dimensions.
- Materials:
 - Compatibility: Glass/ plastics, surround materials, sealers, primers and paints/ clear finishes to be used together to be compatible. Avoid contact between glazing panes/ units and alkaline materials such as cement and lime.
 - Protection: Keep materials dry until fixed. Protect insulating glass units and plastics glazing sheets from the sun and other heat sources.

152 PREPARATION

- Surrounds, rebates, grooves and beads: Clean and prepare before installing glazing.

155 GLASS GENERALLY

- Standards: To BS 952 and relevant parts of:
 - BS EN 572 for basic soda lime silicate glass.
 - BS EN 1096 for coated glass.
 - BS EN 1748-1-1 for borosilicate glass.



- BS EN 1748-2-1 for ceramic glass.
- BS EN 1863 for heat strengthened soda lime silicate glass.
- BS EN 12150 for thermally toughened soda lime silicate safety glass
- BS EN 12337 for chemically strengthened soda lime silicate glass.
- BS EN 13024 for thermally toughened borosilicate safety glass.
- BS EN ISO 12543 for laminated glass and laminated safety glass.
- Panes/ sheets: Clean and free from obvious scratches, bubbles, cracks, rippling, dimples and other defects.
 - Edges: Generally undamaged. Shells and chips not more than 2 mm deep and extending not more than 5 mm across the surface are acceptable if ground out.

371 BEAD FIXED INSULATING GLAZING TO WINDOWS/DOORS

- Pane material: Low E 6/16/6 k K glass external pane, toughened & laminated impact glass internally as per door & window schedule.
 - Apply glazing section/strip/tape to rebate upstand in position recommended by the manufacturer.
 - Locate insulating unit centrally in surround using setting and locations blocks.
 - Apply second glazing section/tape to beads, Install beads using sufficient pressure to compress inner and outer sections/strips/tapes and fix securely.
- Ensure that drainage and ventilation holes are not obstructed.

372 REPLACEMENT GLASS

- Single glaze 6mm float, putty glazed with non ferrous sprigs.

150 WORKMANSHIP GENERALLY:

- Glazing generally: to BS 6262.
- The glazing must be wind and watertight under all conditions with full allowance made for deflections and other movements.
- Panes/sheets to be accurately sized, with clean, undisfigured surfaces and undamaged edges.
- Avoid contact between glazing panes/units and alkaline materials such as cement and lime.
- Keep materials dry until fixed. Keep insulating glass units and plastics glazing sheets protected from the sun and away from heat sources.
- Ensure that glass/plastics, surround materials, sealers primers and paints/clear finishes to be used together are compatible. Comply with glazing and sealant manufacturers' recommendations.

152 PREPARATION: Clean surrounds, rebates, grooves and beads, and prepare as specified before installing glazing.

155 GLASS: Generally to BS 952 and the relevant part(s) of BS EN 572, free from scratches, bubbles, cracks, rippling, dimples and other defects.



- 165 HEAT TOUGHENED GLASS to be fixed in the following locations must be subjected to a heat soaking regime. All panes must be heat soaked. Provide certified evidence of treatment.
- 175 EDGE TAPES TO INSULATING UNITS: Report to CA any damage to edge tapes. Obtain approval of proposed method of repair.
- 180 BEAD FIXING WITH PINS: Space pins evenly at not more that 150mm centres, and within 50mm of each corner. Punch pins just below the timber surface.



20 PLASTERED/ RENDERED/ ROUGHCAST COATING

To be read with Preliminaries/ General conditions.

TYPES OF COATING

110 CEMENT:LIME:SAND INTERNAL RENDER

- Substrate: Maspnry
 - Preparation: None.
- Cement:lime:sand mortar:
 - Type: Contractor's choice.
 - Pigment: Not required.
- Undercoats:
 - Mix (cement:lime:sand): 1:1:6.
 - Cement type: Portland.
 - Thickness (excluding dubbing out and keys): 8mm to 10mm.
- Final coat:
 - Mix (cement:lime:sand): 1:1:6.
 - Cement type: Portland.
 - Other requirements: None.
 - Thickness: 10mm.
 - Finish: Wood float.
- Accessories: Angle beads and stop beads.

112 CEMENT:LIME:SAND RENDER TO EXTERNAL SURFACES

- Substrate: Masonry
 - Preparation: None.
- Cement:lime:sand mortar:
 - Type: Contractor's choice.
 - Pigment: Not required.
- Undercoats:
 - Mix (cement:lime:sand): 1:1:6.
 - Cement type: Portland.
 - Thickness (excluding dubbing out and keys): 8mm to 10mm.
- Final coat:
 - Mix (cement:lime:sand): 1:1:6.
 - Cement type: Portland.
 - Other requirements: None.
 - Thickness: 10mm.
 - Finish: Smooth wood float finish.
- Accessories: Angle beads and stop beads

200 GYPSUM PLASTER ON CEMENT GAUGED UNDERCOATS TO CONCRETE BLOCKWORK WALLS INTERNALLY.

- Substrate: Concrete blockwork.
 - Preparation: Stipple key.
- Undercoats:
 - Mix: 1:5 cement / sand.



- Thickness (excluding dubbing out and keys): 16mm maximum overall.
- Final coat: Gypsum plaster to BS EN 13279-1, class B.
 - Manufacturer: Contractor's choice.
 - Thickness: 2mm – 3mm.
 - Finish: Smooth steel trowelled.
- Accessories: Beads and stops.

280 GYPSUM PLASTER SKIM COAT ON PLASTERBOARD TO INTERNAL FACES OF EXTERNAL TIMBER STUD WALLS AND TO CEILINGS.

- Plasterboard: 12.5mm thick Duplex plasterboard.
 - Preparation: Bonding agent as recommended by plaster manufacturer.
- Plaster: Board finish/ finish plaster to BS EN 13279-1, class B.
 - Manufacturer: Contractor's choice.
 - Thickness: 5mm (in 2 coats).
 - Finish: Smooth steel trowelled.
- Accessories: Angle beads; stops.

281 GYPSUM PLASTER SKIM COAT ON PLASTERBOARD TO FACES OF INTERNAL STUD PARTITIONS.

- Plasterboard: 12.5mm thick plasterboard.
 - Preparation: Bonding agent as recommended by plaster manufacturer.
- Plaster: Board finish/ finish plaster to BS EN 13279-1, class B.
 - Manufacturer: Contractor's choice.
 - Thickness: 5mm (in 2 coats).
 - Finish: Smooth steel trowelled.
- Accessories: Angle beads; stops.

MATERIALS AND MAKING OF MORTAR

430 READY-TO-USE CEMENT GAUGED MORTARS

- Time and temperature limitations: Use within limits prescribed by mortar manufacturer.
 - Retempering: Restore workability with water only within prescribed time limits.

438 CEMENTS FOR MORTARS

- Cement: To BS EN 197-1 and CE marked.
 - Types: Portland cement, CEM I.
Portland slag cement, CEM II.
Portland fly ash cement, CEM II.
 - Strength class: 32.5, 42.5 or 52.5.
- White cement: To BS EN 197-1 and CE marked.
 - Type: Portland cement, CEM I.
 - Strength class: 52.5.
- Sulfate resisting Portland cement: To BS 4027 and Kitemarked.
 - Strength class: 42.5.
- Masonry cement: To BS EN 998-1 and Kitemarked.



- 440 SAND FOR CEMENT GAUGED MORTARS
- Standard: To BS EN 13139.
 - Grading: 0/2 or 0/4 (CP or MP); category 2 fines.
 - Colour and texture: Consistent. Obtain from one source.
- 443 LIME FOR CEMENT GAUGED MORTARS
- Standard: To BS EN 459-1.
 - Type: CL 90S.
- 445 PIGMENT FOR COLOURED MORTARS
- Standard: To BS EN 12878.
- 449 ADMIXTURES FOR CEMENT GAUGED MORTARS
- Suitable admixtures: Select from:
 - Air entraining (plasticizing) admixtures: To BS EN 934-2 and compatible with other mortar constituents.
 - Other admixtures: Submit proposals.
 - Prohibited admixtures: Calcium chloride and any admixture containing calcium chloride.
- 478 HYDRAULIC LIME
- Standard: To BS EN 459-1.
 - Type: Natural hydraulic lime (NHL).
- 481 READY PREPARED LIME PUTTY
- Type: Slaked directly from CL 90 quicklime to BS EN 459-1, using an excess of water.
 - Maturation: In pits/ containers that allow excess water to drain away.
 - Density of matured lime putty: 1.3–1.4 kg/litre.
 - Maturation period before use (minimum): 90 days.
 - Storage: Prevent drying out or wetting. Protect from frost.
- 495 MIXING
- Render mortars (site-made):
 - Batching: By volume. Use clean and accurate gauge boxes or buckets.
 - Mix proportions: Based on damp sand. Adjust for dry sand.
 - Lime:sand: Mix thoroughly. Allow to stand, without drying out, for at least 16 hours before using.
 - Mixes: Of uniform consistence and free from lumps. Do not retemper or reconstitute mixes.
 - Contamination: Prevent intermixing with other materials.
- 497 COLD WEATHER
- General: Do not use frozen materials or apply coatings on frozen or frost bound substrates.
 - External work: Avoid when air temperature is at or below 5°C and falling or below 3°C and rising. Maintain temperature of work above freezing until coatings have fully hardened.

- Internal work: Take precautions to enable internal coating work to proceed without detriment when air temperature is below 3°C.

PREPARING SUBSTRATES

510 SUITABILITY OF SUBSTRATES

- Soundness: Free from loose areas and significant cracks and gaps.
- Cutting, chasing, making good, fixing of conduits and services outlets and the like: Completed.
- Tolerances: Permitting specified flatness/ regularity of finished coatings.
- Cleanliness: Free from dirt, dust, efflorescence and mould, and other contaminants incompatible with coatings.

541 BONDING AGENT APPLICATION

- General: Apply evenly to substrate to achieve effective bond of plaster/ render coat. Protect adjacent surfaces.

BACKINGS/ BEADS/ JOINTS

607 PROPRIETARY GYPSUM PLASTERBOARD BACKINGS

- Manufacturer: Contractor's choice.
- Exposed surface and edge profiles: Suitable to receive specified plaster finish.

610 FIXING PLASTERBOARD BACKINGS TO TIMBER

- Fixings, accessories and installation methods: As recommended by board manufacturer.
- Fixing: At the following centres (maximum):
 - Nails: 150 mm.
 - Screws to partitions/ walls: 300 mm. Reduce to 200 mm at external angles.
 - Screws to ceilings: 230 mm.
- Position of nails/ screws from edges of boards (minimum):
 - Bound edges: 10 mm.
 - Cut/ unbound edges: 13 mm.
- Position of nails/ screws from edges of supports (minimum): 6 mm.
- Nail/ screw heads: Set below surface. Do not break paper or gypsum core.

612 JOINTS IN PLASTERBOARD BACKINGS

- Ceilings:
 - Bound edges: At right angles to supports and with ends staggered in adjacent rows.
 - Two layer boarding: Stagger joints between layers.
- Partitions/ walls:
 - Vertical joints: Centre on studs. Stagger joints on opposite sides of studs.
 - Two layer boarding: Stagger joints between layers.
 - Horizontal joints:
 - Two layer boarding: Stagger joints between layers by at least 600 mm. Support edges of outer layer.
 - Joint widths (maximum): 3 mm.



- 630 BEADS/ STOPS FOR INTERNAL USE
 - Material: Galvanized steel to BS 13658-1.
- 636 BEADS/ STOPS FOR EXTERNAL USE
 - Material: Stainless steel.
- 640 BEADS/ STOPS GENERALLY
 - Location: External angles and stop ends, except where specified otherwise.
 - Corners: Neat mitres at return angles.
 - Fixing: Secure, using longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with substrate.
 - Beads/ stops for external render: Fix mechanically.
 - Finishing: After coatings have been applied remove surplus material, while still wet, from surfaces of beads/ stops exposed to view.
- 646 CRACK CONTROL AT JUNCTIONS BETWEEN DISSIMILAR SOLID SUBSTRATES
 - Locations: Where defined movement joints are not required. Where dissimilar solid substrate materials are in same plane and rigidly bonded or tied together.
 - Crack control materials:
 - Isolating layer: Building paper to BS 1521.
- Metal lathing: Externally: Stainless steel ribbed expanded metal.
 Internally: Galvanised steel expanded metal with spacers.
- Installation: Fix metal lathing over isolating layer. Stagger fixings along both edges of lathing.
 - Width of installation over single junctions:
 - Isolating layer: 150 mm.
 - Lathing: 300 mm.
 - Width of installation across face of dissimilar substrate material (column, beam, etc. with face width not greater than 450 mm):
 - Isolating layer: 25 mm (minimum) beyond junctions with adjacent substrate.
 - Lathing: 100 mm (minimum) beyond edges of isolating layer.
- 659 PLASTERBOARD JOINTS
 - Joints and angles (except where coincident with metal beads): Reinforce with continuous lengths of jointing tape.

INTERNAL PLASTERING

- 710 APPLICATION GENERALLY
 - Application of coatings: Firmly and in one continuous operation between angles and joints. Achieve good adhesion.
 - Appearance of finished surfaces: Even and consistent. Free from rippling, hollows, ridges, cracks and crazing.
 - Accuracy: Finish to a true plane, to correct line and level, with angles and corners to a right angle unless specified otherwise, and with walls and reveals plumb and square.
 - Drying out: Prevent excessively rapid or localized drying out.



715 FLATNESS/ SURFACE REGULARITY

- Sudden irregularities: Not permitted.
- Deviation of plaster surface: Measure from underside of a straight edge placed anywhere on surface.
 - Permissible deviation (maximum) for plaster not less than 13 mm thick: 3 mm in any consecutive length of 1800 mm.

720 DUBBING OUT

- General: Correct substrate inaccuracies.
- New smooth, dense concrete and similar surfaces: Dubbing out prohibited unless total plaster thickness is within range recommended by plaster manufacturer.
- Thickness of any one coat (maximum): 10 mm.
- Mix: As undercoat.
- Application: Achieve firm bond. Allow each coat to set sufficiently before the next is applied. Cross scratch surface of each coat.

725 UNDERCOATS GENERALLY

- General: Rule to an even surface. Cross scratch to provide a key for the next coat.
- Undercoats on metal lathing: Work well into interstices to obtain maximum key.
- Undercoats gauged with Portland cement: Do not apply next coat until drying shrinkage is substantially complete.

777 SMOOTH FINISH

- Appearance: A tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks. Avoid water brush, excessive trowelling and over polishing.

778 WOOD FLOAT FINISH

- Appearance: An even overall texture. Finish with a dry wood float as soon as wet sheen has disappeared.

M60 PAINTING / CLEAR FINISHING

COATING SYSTEMS

110 EMULSION PAINT TO INTERNAL PLASTERED SURFACES.

- Manufacturer: Dulux.
 - Product reference: Trade Supermatt.
- Surfaces: New internal skim plastered surfaces of walls and ceilings.
 - Preparation: As Clause 580 .
- Initial coats: 25% thinned coat.
 - Number of coats: One.
- Finishing coats: Full coats.
 - Number of coats: Two.



- 130 GLOSS PAINT TO INTERNAL JOINERY (SKIRTINGS, DOOR FRAMES, ARCHITRAVES, ETC) AND TO INTERNAL DOORS.
- Manufacturer: Contractor's choice.
 - Surfaces: Primed timber / plywood as appropriate.
 - Preparation: As Clause 471.
 - Undercoats: As recommended by manufacturer.
 - Number of coats: Two.
 - Finishing coats: Gloss.
 - Number of coats: One.
- 131 GLOSS PAINT TO EXPOSED STEEL (EXCEPT TO AREAS TO BE TREATED WITH INTUMESCENT PAINT).
- Manufacturer: Contractor's choice.
 - Surfaces: Primed steel.
 - Preparation: As Clause 500.
 - Initial coats: None.
 - Undercoats: As recommended by manufacturer.
 - Number of coats: Two.
 - Finishing coats: Gloss.
 - Number of coats: One.
- 160 DECORATIVE WOODSTAIN / VARNISH / PRESERVATIVE TO EXTERNAL TIMBER FASCIAS, SOFFITS, DOORS, HANDRAILS, ETC.
- Manufacturer: Contractor's choice.
 - Surfaces: Unprimed timber / plywood as appropriate.
 - Preparation: As Clause 481.
 - Initial coats: None.
 - Finishing coats: Timber stain, to shade as selected by client.
 - Number of coats: Two.
- 170 MASONRY COATING TO NEW WALL SURFACES EXTERNALLY.
- Manufacturer: Dulux.
 - Product reference: Weathershield.
 - Surfaces: New rendered surfaces.
 - Preparation: As Clause 570.
 - Initial coats: 25% thinned coat.
 - Number of coats: One.
 - Finishing coats: Full coats.
 - Number of coats: Two.

GENERAL

- 210 COATING MATERIALS
- Manufacturers: Obtain materials from any of the following: Dulux.
 - Selected manufacturers: Submit names before commencement of coating work.
- 215 HANDLING AND STORAGE
- Coating materials: Deliver in sealed containers, labelled clearly with brand name, type of material and manufacturer's batch number.



- Materials from more than one batch: Store separately. Allocate to distinct parts or areas of the work.

240 SURFACES NOT TO BE COATED

- Radiator valves and stop valves.

280 PROTECTION

- 'Wet paint' signs and barriers: Provide where necessary to protect other operatives and general public, and to prevent damage to freshly applied coatings.

PREPARATION

400 PREPARATION GENERALLY

- Standard: In accordance with BS 6150.
- Suspected existing hazardous materials: Prepare risk assessments and method statements covering operations, disposal of waste, containment, and reoccupation, and obtain approval before commencing work.
- Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
- Substrates: Sufficiently dry in depth to suit coating.
- Efflorescence salts: Remove.
- Dirt, grease and oil: Remove. Give notice if contamination of surfaces/ substrates has occurred.
- Surface irregularities: Remove.
- Joints, cracks, holes and other depressions: Fill flush with surface, provide smooth finish.
- Dust, particles and residues from preparation: Remove and dispose of safely.
- Water based stoppers and fillers:
 - Apply before priming unless recommended otherwise by manufacturer.
 - If applied after priming: Patch prime.
- Oil based stoppers and fillers: Apply after priming.
- Doors, opening windows and other moving parts:
 - Ease, if necessary, before coating.
 - Prime resulting bare areas.

420 FIXTURES AND FITTINGS

- Removal: Before commencing work remove: Grilles, cover plates and other surface mounted fixtures.
- Replacement: Refurbish as necessary, refit when coating is dry.

425 IRONMONGERY

- Removal: Before commencing work remove ironmongery from surfaces to be coated.
- Hinges: Do not remove.
- Replacement: Refurbish as necessary; refit when coating is dry.

471 PREPRIMED WOOD

- Areas of defective primer: Take back to barewood and reprime.



- 481 UNCOATED WOOD
- General: Provide smooth, even finish with arrises and moulding edges lightly rounded or eased.
 - Heads of fasteners: Countersink sufficient to hold stoppers/ fillers.
 - Resinous areas and knots: Apply two coats of knotting.
- 500 PREPRIMED STEEL
- Areas of defective primer, corrosion and loose scale: Take back to bare metal. Reprime as soon as possible.
- 511 GALVANIZED, SHERARDIZED AND ELECTROPLATED STEEL
- White rust: Remove.
 - Pretreatment: Apply one of the following:
 - 'T wash'/ mordant solution to blacken whole surface.
 - Etching primer recommended by coating system manufacturer.
- 521 UNCOATED STEEL - MANUAL CLEANING
- Oil and grease: Remove.
 - Corrosion, loose scale, welding slag and spatter: Remove.
 - Residual rust: Treat with a proprietary removal solution.
 - Primer: Apply as soon as possible.
- 570 UNCOATED MASONRY/ RENDERING
- Loose and flaking material: remove.
- 580 UNCOATED PLASTER
- Nibs, trowel marks and plaster splashes: Scrape off.
 - Overtrowelled 'polished' areas: Key lightly.
- 590 UNCOATED PLASTERBOARD
- Depressions around fixings: Fill with stopper/ filler.
- 645 SEALING OF INTERNAL MOVEMENT JOINTS
- General: To junctions of walls and ceilings with architraves, skirtings and other trims.
 - Sealant: Water based acrylic.
 - Manufacturer: Contractor's choice.
 - Preparation and application: As section Z22.

APPLICATION

- 711 COATING GENERALLY
- Application: In accordance with BS 6150, clause 9.
 - Conditions: Maintain suitable temperature, humidity and air quality during application and drying.
 - Surfaces: Clean and dry at time of application.
 - Thinning and intermixing of coatings: Not permitted unless recommended by manufacturer.
 - Overpainting: Do not paint over intumescent strips or silicone mastics.
 - Priming coats:



- Thickness: To suit surface porosity.
- Application: As soon as possible on same day as preparation is completed.
- Finish:
 - Even, smooth and of uniform colour.
 - Free from brush marks, sags, runs and other defects.
 - Cut in neatly.
- Doors, opening windows and other moving parts: Ease before coating and between coats.

730 WORKSHOP COATING OF CONCEALED JOINERY SURFACES

- General: Apply coatings to all surfaces of components.

731 SITE COATING OF CONCEALED JOINERY SURFACES

- General: After priming, apply additional coatings to surfaces that will be concealed when fixed in place.
 - Components: External door frames.
 - Additional coatings: One undercoat.

751 STAINING WOOD

- Primer: Apply, if recommended by stain manufacturer.
- Application: Apply in flowing coats and brush out excess stain to produce uniform appearance.

770 EXTERNAL DOORS

- Bottom edges: Prime and coat before hanging doors.

N10 GENERAL FIXTURES / FURNISHINGS / EQUIPMENT

To be read with Preliminaries/General conditions.

COMPONENTS

N10 GENERAL FIXTURES / FURNISHINGS / EQUIPMENT

WORKMANSHIP

410 INSTALLATION GENERALLY:

- Assemble and fix appliances and accessories so that surfaces designed to falls, drain as intended.
- Use non ferrous or stainless steel fastenings unless specified otherwise.
- When not specified otherwise, use jointing and bedding compounds recommended by the manufacturers of the appliances, accessories and pipes being jointed or bedded.
- Prevent use of appliances for any purpose until Practical Completion.
- On completion, check for damage and defects and test for satisfactory operation. Replace damaged or defective components and accessories. Clean thoroughly.



- 420 NOGGINGS/BEARERS: Ensure that noggings, bearers, etc. required to support sanitary appliances and fittings are accurately positioned and securely fixed.

EXECUTION

610 INSTALLATION GENERALLY

- Assembly and fixing: Surfaces designed to falls to drain as intended.
- Fasteners: Nonferrous or stainless steel.
- Supply and discharge pipework: Fix before appliances.
- Fixing: Fix appliances securely to structure. Do not support on pipework.
- Jointing and bedding compounds: Recommended by manufacturers of appliances, accessories and pipes being jointed or bedded.
- Appliances: Do not use. Do not stand on appliances.
- On completion: Components and accessories working correctly with no leaks.
- Labels and stickers: Removed.

620 NOGGINGS AND BEARERS

- Noggings, bearers, etc. to support sanitary appliances and fittings: Position accurately. Fix securely.

P10 SUNDRY INSULATION / PROOFING WORK / FIRE STOPS

130 INSULATION FIXED TO EXISTING ROOF:

- Xtratherm thin R
- Thickness: 25mm between rafters, 100mm under rafters in continuous layer
- Fit tightly with closely butted joints, leaving no gaps. Use fastenings where necessary to prevent slumping.
- Before fixing, ensure that holes in the ceiling for pipes, lighting drops, etc. are sealed and all debris has been removed.
- Use widest practical widths of insulation and lay at right angles to ties/joists with closely butted joints, leaving no gaps.

- 440 FIRE STOPPING: Ensure that any imperfections of fit between building elements which are required to have fire resistance and/or resist the passage of smoke, are completely sealed. Where not specified otherwise, tightly pack gaps with mineral fibre.

P12 FIRE STOPPING SYSTEMS

To be read with Preliminaries/ General conditions.

GENERAL

130 FIRE STOPPING TO PIPES PASSING THROUGH FIRE RESISTING WALLS AND FLOORS.

- Joint filler: Pipe collars.
 - Size or thickness: To achieve 2 hours fire resistance.
 - Pipe outside diameter: Varies.



PRODUCTS

375 PIPE COLLARS – INSULATED WRAP

- Manufacturer: Rockwool.
 - Product reference: Fire Pro Intumescent Pipe Wraps.

EXECUTION

620 WORKMANSHIP GENERALLY

- Gaps: Seal gaps between building elements and services, to provide fire resistance and resist the passage of smoke.
- Adjacent surfaces: Prevent overrun of sealant or mortar on to finished surfaces.

690 FIXING PIPE COLLARS

- Collar fixing: Self adhesive strips. Seal pipe wrap into the structure with Rockwool Corofil Firestop Compound.
- Gap around collar: As per the manufacturer's recommendations.

COMPLETION

910 CLEANING

- Masking tapes: Remove.
- Cleaning: Clean off splashes and droppings. Wipe down finishes.

920 INSPECTION

Notice for inspection (minimum): 2 days.

P20 UNFRAMED ISOLATED TRIMS / SKIRTINGS / SUNDRY ITEMS

To be read with Preliminaries/General conditions.

110 SKIRTINGS TO MATCH EXISTING

- Quality of timber and fixing: To BS 1186:Part 3.
 - Species: appendix B
 - Class: 2 or 3
 - Moisture content at time of fixing: 10 to 14 %

111 SOFTWOOD WINDOW BOARDS GENERALLY.

- Quality of wood and fixing: To BS 1186-3.
 - Species: Contractor's choice.
 - Class: 1.
- Moisture content at time of fixing: 8 – 12%.
- Preservative treatment: Organic solvent.
- Fire rating: Not applicable.
- Profile: Rounded at outer edges.
 - Finished size: As shown on drawings.
- Finish as delivered: Prepared and primed.
- Fixing: Nailed to treated timber battens / studwork as appropriate.



- 112 **SOFTWOOD ARCHITRAVES GENERALLY.**
- Quality of wood and fixing: To BS 1186-3.
 - Species: Contractor's choice.
 - Class: 1.
 - Moisture content at time of fixing: 8 – 12%.
 - Preservative treatment: Organic solvent.
 - Fire rating: Not applicable.
 - Profile: Bullnose.
 - Finished size: 44 x 12
 - Finish as delivered: Prepared and primed.
 - Fixing: Nailed to treated timber linings / door frames.

- 510 **INSTALLATION GENERALLY:**
- Joinery workmanship to be as section Z10 unless specified otherwise.
 - Methods of fixing and fastenings to be as section Z20 unless specified otherwise.
 - Straight runs to be formed in single lengths wherever possible. Location and method of forming running joints to be approved by the CA where not detailed.
 - All joints at angles to be mitred unless specified otherwise.
 - Moisture content of timber and wood based boards to be maintained during storage and installation within the range specified for the component.

P21 IRONMONGERY

To be read with Preliminaries/General conditions.

GENERALLY

- 110 **GENERAL REQUIREMENTS:**
Detailed requirements and locations of ironmongery are scheduled.

P31 HOLES / CHASES / COVERS / SUPPORTS FOR SERVICES

To be read with Preliminaries/General conditions.

PRODUCTS

- 300 **FLOOR DUCTING/ TRUNKING**
- Obtain detailed requirements from subcontractor allow for & provide.
- 370 **ACCESS COVERS/ GRATINGS**
- Obtain detailed requirements from subcontractor allow for & provide.



400 METER CABINETS

- Obtain detailed requirements from subcontractor allow for & provide.

EXECUTION

610 COORDINATION

Locations and dimensions of holes and chases for services: Submit details.

620 HOLES AND CHASES IN IN SITU CONCRETE

- Cast in: Holes larger than 10 mm diameter and chases.
- Cutting and drilling:
 - Permitted for holes not larger than 10 mm diameter.
 - Not permitted for holes larger than 10 mm diameter except as indicated on drawings.

640 HOLES IN STRUCTURAL STEELWORK

- Cutting and drilling: Not permitted except as indicated on drawings.

650 HOLES, RECESSES AND CHASES IN MASONRY

- Locations: To maintain integrity of strength, stability and sound resistance of construction.
- Sizes: Minimum needed to accommodate services.
 - Holes (maximum): 300 x 300 mm.
- Walls of other materials:
 - Vertical chases: No deeper than one third of single leaf thickness, excluding finishes.
 - Horizontal or raking chases: No longer than 1 m. No deeper than one sixth of the single leaf thickness, excluding finishes.
- Chases and recesses: Do not set back to back. Offset by a clear distance at least equal to the wall thickness.
- Cutting: Do not cut until mortar is fully set. Cut carefully and neatly. Avoid spalling, cracking and other damage to surrounding structure.

670 NOTCHES AND HOLES IN STRUCTURAL TIMBER

- General: Avoid if possible.
- Sizes: Minimum needed to accommodate services.
- Position: Do not locate near knots or other defects.
- Notches and holes in same joist: Minimum 100 mm apart horizontally.
- Notches in joists: Locate at top. Form by sawing down to a drilled hole.
 - Depth (maximum): 0.125 x joist depth.
 - Distance from supports: Between 0.07 and 0.25 x span.
- Holes in joists: Locate on neutral axis.
 - Diameter (maximum): 0.25 x joist depth.
 - Centres (minimum): 3 x diameter of largest hole.
 - Distance from supports: Between 0.25 and 0.4 of span.
- Notches in roof rafters, struts and truss members: Not permitted.
- Holes in struts and columns: Locate on neutral axis.
 - Diameter (maximum): 0.25 x minimum width of member.
 - Centres (minimum): 3 x diameter of largest hole.
 - Distance from ends: Between 0.25 and 0.4 of span.



230 NOTCHES AND HOLES IN STRUCTURAL TIMBER:

- To be avoided wherever possible and to be the minimum sizes needed to accommodate services.
- Do not position near knots or other defects in the same cross section which would significantly affect strength of timber.
- Notches and holes in the same joist to be at least 100mm apart horizontally.
- Notches in joists to be at the top, located between 0.07 and 0.25 of span from support, not deeper than 0.125 x depth of joist and to be formed by sawing down to a drilled hole.
- Holes in joists to be on the neutral axis, with diameter not more than 0.25 x depth of joist, spaced at centres not less than 3 x diameter of largest hole and located between 0.25 and 0.4 of span from support.
- Notches in roof rafters, struts and columns will not be permitted.
- Holes in struts and columns to be on the neutral axis, with diameters not exceeding 0.25 x minimum width of member, located between 0.25 and 0.4 of length from end and spaced at centres not less than 3 x diameter of largest hole.

T32 HOT WATER HEATING AND SERVICES

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/REQUIREMENTS

- 100 THE INSTALLATION: Contractor to design the whole system
- Drawing reference(s): see drawing schedule
 - Heat source: oil fired boiler
 - Heat emitters: radiators to match
 - Circulation: hot water.
- Control: control by zones linked to overall control.

V90 GENERAL LIGHTING AND POWER

GENERAL INFORMATION / REQUIREMENTS

100 THE INSTALLATION

105 REGULATIONS: Comply with:

- BS 7671 'Requirements for Electrical Installations', (The IEE Wiring Regulations).
- Requirements of the Electricity Supply Company.
- Approved Document P of the Building Regulations

110 ELECTRICITY SUPPLY:

- Liaise with the Electricity Supply Company as necessary to confirm or determine:
- The maximum demand of the installation.



- The nature of the supply, its suitability for the installation and the type of earthing arrangement
- The location of the incoming supply.
- Space requirements for the Company's switches, fuses and meters.
- A provisional sum for connection of a supply and earthing by the Electricity Supply Company is included elsewhere. Make all necessary arrangements at the earliest opportunity to ensure necessary alterations to the connection are completed when required.

115 **ARRANGEMENT OF CIRCUITS:** Divide the installation into separately controlled circuits as described below, further subdividing where necessary to ensure compliance with BS 7671 (The IEE Wiring Regulations): Note supply capacities relate to peak loading, diversity to be applied for total load.

Western Power: Arrange and pay for Western Power to remove the overhead line and provide new underground entry as shown to WP intake in new location. Provide new mains intake board.

120 **EQUIPOTENTIAL BONDING:** Install main and supplementary bonding conductors in accordance with the requirements of BS 7671 (The IEE Wiring Regulations).

130 **INSTALLATION GENERALLY:**

- Install, test and commission the electrical work in accordance with BS 7671 (The IEE Wiring Regulations), ensuring compliance with design and performance requirements, to provide a safe, well insulated, earth protected system capable of supplying the anticipated maximum demand.
- Installation work to be carried out by qualified electricians fully conversant with BS 7671 (The IEE Wiring Regulations).
- Fastenings, bushes, glands, terminals, connectors, clips, clamps and all other minor accessories necessary to complete the installation to be types recommended for the purpose by relevant equipment, accessories, etc. manufacturer.
- In locations where moisture is present or may occur, use corrosion resisting fastenings and avoid contact between dissimilar metals.

140 **BUILDER'S WORK:** Comply with restrictions on the cutting of holes, chases, notches, etc. and methods of attachment to the building fabric specified in section P31.

CONDUIT / TRUNKING / DUCTING

210 **STEEL CONDUIT AND FITTINGS:**

- Location/use: use generally finish plain galvanised
- To BS 4568:Parts 1 and 2.
Manufacturer and reference: contractors choice
Type: Seam welded with plain threadable ends.
Size: In accordance with BS 7671 (The IEE Wiring Regulations).
Fittings: MK metal clad
- Use maximum practical lengths to minimise number of joints. Form bends by machine and remove burrs from cut ends.
- Use bends and/or junction boxes at changes of direction. Do not use elbows or tees of any sort without approval.



- Fix securely with boxes fixed independently of conduit.
 - Tightly screw all joints to ensure electrical continuity, with no thread showing. Use expansion couplings where conduit crosses movement joints in structure.
 - Make secure connections to boxes, trunking, etc. with screwed couplings and provide rubber bushes at open ends.
- 250 **INSTALLING CONDUIT IN CONCRETE:** Fix securely to reinforcement and fix boxes to formwork to prevent displacement. Depth of concrete cover to be not less than specified for reinforcement.
- 260 **DRAINAGE OF CONDUIT:** Provide drainage outlets at lowest points in conduit installed externally and in locations where condensation may occur.
- 310 **STEEL SURFACE TRUNKING SYSTEM:**
- Location/use: lighting installation
 - To BS 4678:Part 1.
 - Manufacturer and reference: Telemechanique Canalis
 - Size: In accordance with BS 7671 (The IEE Wiring Regulations).
 - Fittings: lighting wired for direct connection to canalis – provide additional 20 no connectors hand to Client
- Mounting/support: provide unistrut to concrete soffit before ceiling is fixed
- 370 **FIRE STOPPING OF TRUNKING/DUCTING:** Seal internally with intumescent putty where they pass through fire resisting floors, ceilings, cavity barriers and the like.

CABLING

- 410 **CABLES** to be BASEC certified. Select types and sizes to suit operating conditions, ensuring compliance with BS 7671 (The IEE Wiring Regulations). Obtain approval before proceeding with installation.
- 420 **CABLE ROUTES** to be:
- Straight, vertical or horizontal and parallel to walls unless shown otherwise.
 - In approved locations where exposed to view. When not specified otherwise, conceal cables wherever possible.
 - Positioned at least 150mm clear of other services. Cables running parallel and adjacent to heating pipes to be located below the pipes.
 - Concealed horizontal runs in walls, if unavoidable, to be located within 150mm of ceiling or between 150 and 300mm of floor.
 - Concealed cable runs to wall switches and outlets to be vertically in line with the accessory.
- 430 **INSTALLING CABLES GENERALLY:**
- Do not commence internal cabling until the building is sufficiently enclosed to ensure permanently dry conditions.
 - Install cables neatly and securely, adequately protected against accidental damage, adverse environmental conditions, mechanical stress and deleterious substances.
 - Install cables without joints other than at equipment and terminal fittings. Do not use junction boxes without approval.



- Sleeve cables passing through masonry walls with conduit bushed at both ends.
 - Do not run cables in spaces where they will be surrounded or covered by insulation. Where this is not practical, size cables accordingly and inform CA.
- 450 **ARMOURED CABLE:**
- Handle and install carefully to prevent damage to sheath and armouring.
 - Do not install if cable and ambient temperature are, or have been for the previous 24 hours, below 0 deg C.
 - Fit galvanized steel guards where cables are liable to mechanical damage.
 - Bond armour to equipment and main earthing system.
 - Make moisture proof connections to apparatus using sealed glands and PVC shrouds.
- 460 **PVC SHEATHED CABLES:**
- Do not install cables when the temperature is near or below freezing.
 - Do not install in cavities of external walls.
 - Fit insulating cable glands at entries to equipment.
 - Terminate cable sheaths within boxes.
- 510 **CABLES LAID DIRECTLY IN THE GROUND:**
- Before laying cables, ensure that bottom of trench is even and free from sharp stones, roots, etc.
 - Lay cables on a 75mm bed of sand.
 - Where two or more cables are laid in the same trench, set 150mm apart.
 - Cover each cable with 75mm of sand overlaid with cable covers to BS 2484.
 - Mark each change in direction of cables with a precast concrete slab, size 300 x 300 x 150mm thick, impressed with 'LV CABLE' and laid level with finished ground level.
- 550 **CABLES ENTERING BUILDING(S) FROM BELOW GROUND:** Seal both ends of pipe duct to a depth of not less than 150mm, with an approved non hardening, non cracking, water resistant compound. Alternatively, fit a proprietary moulded pipe duct seal.
- 560 **CABLES IN PLASTER:** Cover with galvanized steel channel nailed to background.
- 570 **CABLES IN VERTICAL TRUNKING/DUCTS:**
- Support with pin racks or cleats at each floor level or at 5m vertical centres, whichever is less.
 - Provide and fix heat barriers at not more than 5m centres where fire resisting barriers are not specified.
- 580 **CABLES IN ACCESSIBLE ROOF SPACES:** Cables running across ceiling joists to be fixed to timber battens nailed to joists.

EQUIPMENT / ACCESSORIES

- 610 **CONSUMER CONTROL UNIT(S):**
- To BS 5486:Part 13.
Manufacturer and reference: contractors choice



- Main control:cut out
Rating: To suit maximum demand.
 - Number of ways: Total required plus 3 spare
Each way to be permanently labelled to identify circuit and rating.
 - Circuit protection:
Miniature circuit breakers to BS EN 60898.
30mA RCCB to BS 4293
 - Enclosure: Plastics
- 650 ELECTRICAL ACCESSORIES: Types shown on drawings, complete with mounting boxes and, unless specified otherwise, to be from Forbes & Lomax
- 730 VENTILATING FAN(S):
To BS 3456:Part 102:Section 102.342. BEAB approved.
Manufacturer and reference: vent axia or equal
- 780 MULTIGANG SWITCHES: Connect switches so that there is a logical relationship with luminaires. Fit blanks to unused switch spaces.

SPECIAL SYSTEMS

- 840 SMOKE ALARMS:
Self-contained type to BS 5446:Part 1, Kite mark certified.
Manufacturer and reference: contractors choice
Operation: Mains with D.C. battery back-up.

COMPLETION

- 910 INSPECTION AND TESTING:
- To BS 7671 (The IEE Wiring Regulations:Part 7).
 - Give not less than 24 hours notice before commencing tests.
 - In addition to items required to be inspected or tested, ensure that labels and signs required by the Regulations are securely fixed in the correct locations.
 - After satisfactory completion of tests submit two copies of inspection and completion certificates to CA.
- 930 INSPECTION, INITIAL TESTING, COMMISSIONING AND CERTIFICATION OF FIRE ALARM SYSTEM:
- To BS 5839:Part 1, clause 26.
 - Give not less than 24 hours notice before commencing tests.
 - After satisfactory completion of tests submit two copies of certificates to CA.
- Certificates to be as BS 5839:Part 1, Appendices B and C.
- 970 DOCUMENTATION: Hand over to the CA at Practical Completion:
- Copies of manufacturers' operating and maintenance instructions for all fittings and apparatus.
2. As-installed drawings showing all circuits and their ratings and the locations of all fittings and apparatus.



Z22 SEALANTS

To be read with Preliminaries/General conditions.

- 110 SEALANT TYPES: As specified in the relevant section.
- 120 SUITABILITY OF JOINTS: Before commencing, check that:
- Joint dimensions are within limits specified for the sealant.
 - Surfaces are smooth and undamaged.
 - Preparatory work which must be done before assembly of the joint has been carried out.
- Inform CA if joints are not suitable to receive sealant and submit proposals for rectification.
- 130 PREPARING JOINTS:
- Clean surfaces to which sealant must adhere using methods and materials recommended by sealant manufacturer.
 - Remove all temporary coatings, tapes, loosely adhering material, dust, oil, grease and other contaminants which may affect bond.
 - Keep joints clean and protect from damage until sealant is applied.
 - Backing strip, bond breaker, primer: Types recommended for the purpose by sealant manufacturer.
 - Insert backing strips and/or bond breaker tape into joint leaving no gaps.
 - Cover adjacent surfaces with masking tape to prevent staining and protect surfaces which would be difficult to clean if smeared with primer or sealant.
- 160 APPLYING SEALANTS:
- Ensure that operatives observe manufacturer's and statutory requirements for storage and safe usage of sealants.
 - Use equipment and methods recommended by sealant manufacturer and apply within the recommended application life of primer and sealant, and the recommended air and substrate temperature ranges.
 - Do not apply to damp surfaces (unless recommended otherwise), to surfaces affected by ice or snow or during inclement weather. Do not heat joints to dry them or raise the temperature.
 - Fill joints completely, leaving no gaps, excluding all air and ensuring firm adhesion of sealant to required joint surfaces. Tool the sealant to a neat, slightly concave profile unless specified otherwise.
 - Protect until cured.

