

9-11 The Square Residential Conversion Works

Tender Document

Unitas Ltd

16th April 2019

Notice

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Document history

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Client signoff

Client	Unitas Ltd
Project	9-11 The Square Residential Conversion Works
Job number	518 1996
Client signature / date	

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1. Preambles



9-11 The Square Residential Conversion Works

April 2019

SECTION 1 Preambles



Preambles

DOCUMENT USE: Contractor is responsible for applying and verifying all arithmetical formulas to this excel document to safeguard the validity of their own tender.

Item Measurement

- A Any quantities stated within the Schedule of Works and Specification items are for the guidance of the Contractor in pricing. However, the Contractor should be aware that this is not a quantities based contract and as such he will be deemed to have visited the site to ascertain the full extent and nature of the works described or indicated on the contract drawings.
- B No claim shall be considered that results from a lack of knowledge or discrepancy of information, which could have reasonably been obtained from on-site investigations.
- C All areas and measurements provided are provisional in nature and are subject to re-measure.

General

- D No works are to be started without prior arrangement with the Contract Administrator. No claims for loss of time or other charges will be entertained should this procedure not be complied with.
- E The Contractor will be deemed to have allowed for all plant and access equipment necessary to undertake the works when pricing this document.
- F The Contractor will be deemed to have allowed for all skips and permits necessary to undertake the works. Upon completion of the works, the Contractor will allow for the removal and disposal of all surplus materials and leaving the site
- G The Contractor is to undertake to move all furniture and fixtures necessary to undertake the works and to sheet down as necessary all items and surfaces requiring protection.
- H The Contractor will locate, identify and protect all live services within the contract boundaries, except for where specifically requested otherwise by the Contract Administrator.
- I The site address is:
9-11 The Square,
Meir,
Stoke-on-Trent,
ST3 6DW.

- J The Contractor will undertake works in a manner to prevent and minimise water penetration and allow for temporary weather protection as required throughout the works.
- K The Contractor will ensure that all costs associated with completing the scheduled works are identified within individual sections. SINGLE INCLUSIVE FIGURES THAT COVER MULTIPLE SECTIONS ARE NOT TO BE INCLUDED.

L Programming

A detailed, day by day construction programme will be provided by the Contractor to the Contract Administrator prior to commencing the works.

M Pricing

When pricing this Schedule of Works, the Contractor will be expected to make reference to the documentation contained within the consolidated list of Contract Documentation dated April 2017.

2. Preliminaries

Section 2 - General Preliminaries

To be read in conjunction with:

- The 'General Preliminaries' set out below.
- The JCT Minor Works with Contractors Design preliminaries.

1.1. The details contained within this document are based on the current information available and we will not be held responsible for unknown site conditions or the performance of new materials in the system designed by others.

1.2. The requirements of all relevant British Standards, Industry Codes of Practice guidelines should be complied with at all times.

1.3. Before tendering the contractor should examine the drawings and specification documents, visit the site and ascertain all local conditions and restrictions, accessibility, the full extent and nature of the work, the supply and conditions affecting labour and the execution of the contract generally.

1.4. ACCESS AND SAFE WORKING

1.5. The Contractor shall ensure that they comply at all times with all current Health and Safety legislation. On any contract which involves site operations of 30 working days or more, or 500 or more total person hours, the contract will become notifiable under the CDM Regulations.

1.6. The contractor shall ensure that all ladders, whether used in conjunction with scaffolding or independently, are securely fixed at all times during use and that any necessary fixings are installed in a proper manner, removed on completion with disturbed areas made good to the satisfaction of the Employers Agent.

1.7. The Contractor is to note that access will be provided by the employer.

1.8. STORAGE AND SITE ACCOMMODATION

1.9. The Contractor shall allow for all costs in association with storage of materials, the employer will provide site accommodation free of charge. Location of storage arrangements shall be subject to agreement with the employer. All areas used for storage etc. must be reinstated to the Employers Agents satisfaction and at the Contractor's expense.

1.10. PLANT AND TOOLS

1.11. The Main Contractor / Sub Contractor shall provide all necessary plant, equipment, scaffolding, tools, dust sheets and everything else required for the safe and proper execution of the Contract. Details of safety procedures, training and method statements ensuring safe use of plant, tools and scaffolding are to be provided in the Health & Safety plan prior to commencement.

1.12. SERVICE SUPPLIES

1.13. The Main Contractor shall make all necessary arrangements with the employer where the use of utility services is required. The employer will provide Temporary accommodation for the sole use for the purposes of carrying out the works. Residents'

Total to Collection:
£

£



supplies must under no circumstances be used unless agreed previously with the supervising officer. The Contractor shall as soon as practicable after the Date of Possession provide the Contractor's person in charge with a mobile telephone.

1.14. HEALTH, SAFETY AND WELFARE

1.15. The Contractor shall, during the whole course of the Contract, provide and maintain all necessary health, safety and welfare measures and amenities. The contractor shall comply with all the provisions laid down in the current regulations and any other enactment or regulation relating to the working rules of any industry for people employed on the site, including those employed by sub-contractors.

1.16. The Contractor will be required to produce a copy of his Safety Plan for inspection by the Employers Agent and client appointed Health and Safety Advisor.

1.17. SANITARY FACILITIES

1.18. Operatives may not use the existing or new sanitary facilities. The Contractor is to provide temporary facilities. Any temporary facilities are to be removed leaving the site clean and tidy on completion. Under no circumstances should communal facilities be used for cleaning brushes, etc.

1.19. WORK IN AND AROUND OCCUPIED PROPERTIES

1.20. The Contractor shall allow for carrying out the Works whilst the surrounding buildings are in occupation. The Contractor shall give all residents adequate notice when the work is due to commence. Every care shall be taken to cause as little disturbance and nuisance as possible to other residents during the progress of the Works.

1.21. The Contractor shall bring to the attention of the relevant persons, structure of a temporary nature, planting etc. which requires removal prior to commencement of Works. The Contract Administrator should be informed immediately of any failure to co-operate in this respect.

1.22. The site shall be maintained free from hazards and obstructions which might endanger or inconvenience. Where this is not possible the Contractor shall provide and erect suitable barriers and warning signs. The Contractor shall provide and display suitable "wet coatings or Hot works or similar" signs in large (50mm high) lettering signs in appropriate locations. Such warnings must not be chalked on paving or other surfaces.

1.23. The Contractor is to give consideration to avoiding any risks to residents/occupants and their visitors who will not have the benefit of protective clothing. Any operations which give rise to risks shall, as far as practicable, be confined to areas to which occupants/visitors do not have access. The Contractor shall make full provision of sheeting, hoardings and other temporary works and suitable alternative means of site access, egress and movement around and between areas where work is taking place. Any damage so caused shall be repaired at the Contractor's expense.

1.24. PROTECTION OF THE WORKS

1.25. The Contractor shall allow for providing all necessary protection to the building and grounds while the Works are in progress and shall make good, at his own expense, any damage to existing structures, finishes and landscaping to the Contract Administrator's satisfaction.

Total to Collection:
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1.26. PROTECTION OF RESIDENTS' PROPERTY

- 1.27. The Contractor shall allow for providing all necessary protection required of residents, occupants and common areas and wind and weather protection for the property during the progress of the Work. The Contractor shall additionally provide, where required, protection for planting, paving, ornamentation, adjacent finishes etc. Any damage caused shall be made good, at the Contractor's expense, to the Employers Agent's satisfaction.

1.28. SECURITY OF BUILDINGS

- 1.29. All ladders and other plant placed against the walls of buildings allowing easy access shall be removed at the end of each working day and securely stored to prevent unauthorised use, and shall not be left unattended during the working day.

1.30. ASBESTOS COMPONENTS

- 1.31. The attention of the Contractor is particularly drawn to the use of asbestos fibres in housing construction. It shall be the sole responsibility of the Contractor to ensure that any work carried out on asbestos based or asbestos-cement components complies with the Asbestos (Licensing / none licensable) Regulations, the Control of Asbestos at Work Regulations and all requirements of the Health and Safety Executive, including Codes of Practice L27 and L28.

- 1.32. Detailed Health and Safety Procedures, together with method statements, must be submitted as part of the Health and Safety Plan with regard to any works to, removal of or disposal of Asbestos based products.

1.33. CLEARANCE OF SITE

- 1.34. The Contractor shall: Remove from site all rubbish and superfluous material as it accumulates and maintain the whole area of the Works in a clean and tidy condition, free of obstructions and hazards. Make allowance for the proper and safe disposal of such material in full compliance with the current regulations.

Total to Collection:
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JCT Minor Works with Contractors Design 2016 (MWD)

A PRELIMINARIES/GENERAL CONDITIONS

A10 PROJECT PARTICULARS

- 110 THE PROJECT
- Name: 9-11 The Square Residential Conversion Works.
 - Nature: Converting a former community nursery into a 4 Bedroom, semi-detached houses suitable for disabled occupants and a 2-bedroom house.
 - Location: 9-11 The Square, Meir Stoke-On-Trent, ST3 6DW.
 - Length of contract: 20 weeks
- 120 EMPLOYER (CLIENT)
- Name: Unitas Stoke-On-Trent LTD
 - Address: Alton House, Cromer Road, Stoke-On-Trent, ST1 6AN.
 - Telephone: 01782 234100.
- 130 PRINCIPAL CONTRACTOR (CDM)
- Name: The successful Tenderer
 - Address: To be advised upon Contract Award
 - Contact: To be advised upon Contract Award
 - Telephone: To be advised upon Contract Award
 - Email: To be advised upon Contract Award
- 140 PERSON EMPOWERED BY THE CONTRACT TO ACT ON BEHALF OF THE EMPLOYER
- Title: Contract Administrator.
 - Name: tbc.
 - Address: tbc.
 - Telephone:
 - Email:
- 150 PRINCIPAL DESIGNER
- Name: Townsend & Renaudon
 - Address: Lakeside House, 3 Trentham Office Village, Bellringer Road, Stoke-On-Trent, Staffordshire
 - Contact: David Morris
- 160 QUANTITY SURVEYORS
- N/A
- 200 STRUCTURAL ENGINEERS
- N/A
- 210 BUILDING SERVICES ENGINEERS
- N/A

Total to Collection:
£

£



A11 TENDER AND CONTRACT DOCUMENTS

- 110 TENDER DRAWINGS
- The tender drawings are: as listed in Appendix A
- 120 CONTRACT DRAWINGS
- The Contract Drawings: The same as the tender drawings.
- 160 PRECONSTRUCTION INFORMATION
- Format: The Preconstruction information is described in these preliminaries in Section A34. It refers to information given elsewhere in the preliminaries and other tender documents

Total to Collection:
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A12 THE SITE/ EXISTING BUILDINGS

110 THE SITE

- Description: The site is located within a residential area adjacent to a small green. The site is bordered to the west, south and east by public highways and residential dwellings to the north.



120 EXISTING BUILDINGS ON/ ADJACENT TO THE SITE

- Description: The site is located within a residential area, with a number of houses within the local proximity as well as attached to the site. These buildings will be in use during the contract period, safe access to all adjacent facilities is to be maintained at all times.

140 EXISTING UTILITIES AND SERVICES

- Drawings: (Information shown is indicative only)
- Other information: The Contractor shall take all precautions necessary to protect any existing services crossing the site or site access road or running adjacent to the site or site access road during the course of the works and during excavation / grubbing up. Any damage by the Contractor to services are to be made good, to the approval of the CA or respective authority, at his own cost.

160 SOILS AND GROUND WATER

- N/A

170 SITE INVESTIGATION

- N/A.

200 ACCESS TO THE SITE

- Description: The site is accessed via Leason Road or Holdcroft Place. The access route will be in continual use during the contract period. The Contractor is to ensure that all roads and pavements remain open and operational throughout the contract. The Contractor will ensure that all roads and paths are maintained in a clean condition

Total to Collection:
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throughout the contract and any damage to roads or footpaths will be made good by the Contractor at his own expense.

210 PARKING

- Restrictions on parking of the Contractor's and employees' vehicles: Contractors parking will be restricted to the existing tarmacadam car park to the rear of the site and the street only, where available spaces can be found.

220 USE OF THE SITE

- General: Do not use the site for any purpose other than carrying out the Works.
- Limitations: Contractor to confine all operations to within the site boundary.

230 SURROUNDING LAND/ BUILDING USES

- General: Adjacent or nearby uses or activities are as follows:
- Residential use for all surrounding properties, which will be in use for the duration of the Contract Period.

240 HEALTH AND SAFETY HAZARDS

- General: The nature and condition of the site/ building cannot be fully and certainly ascertained before it is opened up.
- Information: The accuracy and sufficiency of this information is not guaranteed by the Employer or the Employer's representative. Ascertain if any additional information is required to ensure the safety of all persons and the Works.
- Site staff: Draw to the attention of all personnel working on the site the nature of any possible contamination and the need to take appropriate precautionary measures.

250 SITE VISIT

- Assessment: Ascertain the nature of the site, access thereto and all local conditions and restrictions likely to affect the execution of the Works.

Total to Collection:
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A13 DESCRIPTION OF THE WORKS

120 THE WORKS

- Description: Converting a former community nursery into a 4 Bedroom, semi-detached houses suitable for disabled occupants and a 2-bedroom house. Together with all external landscaping and utility supplies.

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A20 JCT MINOR WORKS BUILDING CONTRACT WITH CONTRACTOR'S DESIGN (MWD)

371 JCT MINOR WORKS BUILDING CONTRACT WITH CONTRACTOR'S DESIGN

- The Contract: JCT Minor Works Building Contract with Contractor's Design 2016 Edition.
- Requirement: Allow for the obligations, liabilities and services described.

THE RECITALS

First

THE WORKS AND THE CONTRACT ADMINISTRATOR

- The work comprises: Converting a former community nursery into a 4 Bedroom, semi-detached houses suitable for disabled occupants and a 2-bedroom house.
- Architect/ Contract Administrator: See clause A10/140.

Second

CONTRACTOR'S DESIGNED PORTION

- The Works include the design and construction of:

All MEP requirements and liaison with statutory authorities for new metered connections for Gas, water and Electric. Inclusive of two new central heating and domestic water systems to serve both residential properties and new electrics throughout

Manufacturers softwood staircase design and structural steel work calculations and design for 3x new mild steel universal steel beams, brickwork piers and pad foundation.

Additional foul drainage connections required from the LHS of the building to connect into the existing underground drainage. This includes an externally mounted upright soil and vent pipe to serve the proposed ground floor en-suite and first floor bathroom.

- Final Mechanical, Electrical and Plumbing Designs based upon indicative drawing and performance obligations detailed.
- Final Drainage based upon indicative drawing and performance obligations detailed.
- Steelwork and foundation requirements
- Softwood Timber Staircase
- Utility provisions and connections

Third

CONTRACT DOCUMENTS

- Contract drawings: As listed in clause A11/120.
- Contract documents:
The following have been prepared which show and describe the work to be done:
Schedule of Works, NBS Materials & Workmanship, as included in the Tender Documentation pack.

Fourth

PRICED DOCUMENTS

- Documents to be priced or provided by the Contractor: Schedule of Works, Preliminaries, Contractor's Design proposal for the design portion of works.

Total to Collection:
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ARTICLES

3

ARCHITECT/CONTRACT ADMINSTARTOR

- Architect/Contract Administrator: See clause A10/140.

4 and 5

PRINCIPAL DESIGNER/PRINCIPAL CONTRACTOR

- Principal Designer: See clause A10/150.
- Principal Contractor: See clause A10/150.130

CONTRACT PARTICULARS

Firth Recital and Schedule 2

BASE DATE

- Base date: April 2019

Firth Recital and clause 4.2

COSNTRUCTION INDUSRTY SCEHME (CIS)

- Employer at base date is a 'contractor' for the purpose of the CIS.

Sixth Recital

CDM REGULATIONS

- The project is notifiable.

Eighth Recital and Schedule 3

SUPPLEMENTAL PROVISIONS

- Collaborative working: Supplemental Provision 1 applies.
- Health and safety: Supplemental Provision 2 applies.
- Cost savings and value improvements: Supplemental Provision 3 applies.
- Sustainable development and environmental considerations: Supplemental Provision 4 applies.
- Performance indicators and monitoring: Supplemental Provision 5 does not apply.
- Notification and negotiation of disputes: Supplemental Provision 6 does not apply.

Article 7

ARBITRATION

- Article 7 and Schedule 1 do not apply. Article and clauses deleted.

Clause 2.3

COMMENCEMENT AND COMPLETION

- Completion 20 weeks from Works commencement

Clause 2.9

LIQUIDATED DAMAGES

- At the rate of £2500 per week.

Clause 2.11

RECTIFICATION PERIOD

- Period: 12 Months from the date of practical completion.

Clause 4.3

INTERIM PAYMENTS

- Interim Valuation Dates:
 - The first Interim Valuation Date is: the last Friday of the first month .

Total to Collection:
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- Thereafter at intervals of: 4 weeks
- Payments due prior to practical completion:
- Percentage of total value of the work etc.: 95
- Payments becoming due on or after practical completion:
- Percentage of the total amount to be paid: 97.5% .

Clause 4.3 and 4.8

FLUCTUATIONS PROVISION

- N/A

Clause 4.8.1

SUPPLY OF DOCUMENTATION FOR COMPUTATION OF AMOUNT TO BE FINALLY CERTIFIED

- Period: 3 months from the date of practical completion.

Clause 5.3

CONTRACTOR'S PUBLIC LIABILITY INSURANCE – INJURY TO PERSONS OR PROPERTY

- The required level of cover for any one occurrence or series of occurrences arising out of one event:
 - Not less than: £5,000,000.00

Clauses 5.4A, 5.4B and 5.4C

INSURANCE OF THE WORKS ETC – ALTERNATIVE PROVISIONS

- Clause 5.4C applies.
- Where clause 5.4A or 5.4B applies: N/A
- Where clause 5.4C applies:
- Percentage to cover professional fees: 15%.

Clause 7.2

ADJUDICATION

- The Adjudicator is: To be appointed by nominating body.
- Nominating body: Where no Adjudicator is named or where the named Adjudicator is unwilling or unable to act (whenever that is established): Royal Institution of Chartered Surveyors.

Schedule 1 paragraph 2.1

ARBITRATION

- N/A

THE CONDITIONS

SECTION 1: DEFINITIONS AND INTERPRETATION

1.8 APPLICABLE LAW

- Amendments: None

SECTION 2: CARRYING OUT THE WORKS

SECTION 3: CONTROL OF THE WORKS

SECTION 4: PAYMENT

Total to Collection:
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SECTION 5: INJURY, DAMAGE AND INSURANCE

SECTION 6: TERMINATION

SECTION 9: SETTLEMENT OF DISPUTES

JCT PUBLIC SECTOR SUPPLEMENT

- Document: The JCT Public Sector Supplement 2011- Fair Payment, Transparency and Building Information Modelling.

EXECUTION

- The Contract: Will be executed as a deed

CONTRACT GUARANTEE BOND

- Contract Guarantee Bond: Is not required.

Total to Collection:
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A30 TENDERING/ SUBLETTING/ SUPPLY

MAIN CONTRACT TENDERING

- 110 SCOPE
- General: These conditions are supplementary to those stated in the invitation to tender and on the form of tender.
- 145 TENDERING PROCEDURE
- General: In accordance with NBS Guide to Tendering for Construction Projects.
 - Errors: Alternative 1 is to apply.
- 160 EXCLUSIONS
- Inability to tender: Immediately inform if any parts of the work as defined in the tender documents cannot be tendered.
 - Relevant parts of the work: Define those parts, stating reasons for the inability to tender.
- 170 ACCEPTANCE OF TENDER
- Acceptance: No guarantee is offered that any tender will be recommended for acceptance or be accepted, or that reasons for non acceptance will be given.
 - Costs: No liability is accepted for any cost incurred in the preparation of any tender.
- 195 CONTRACTORS DESIGN
- Drawings and supporting documentation:
 - Submit with sufficient time to allow for Consultants approvals, possible re-design and changes, placing orders, obtaining and fabricating products. Installing, testing and commissioning on site. The Architect, Structural Engineer requires 10 days for approval. The Services Engineer requires 10 days for approval.
 - Submit the names of the proposed designers/manufacturers for each element of works with Tender.

PRICING/ SUBMISSION OF DOCUMENTS

- 210 PRELIMINARIES IN THE SPECIFICATION
- Measurement rules: Preliminaries/ General Conditions have not been prepared in accordance with SMM7 / NMR.
- 220 PRICING OF PRELIMINARIES
- Charges: If the Contractor requires interim payments to include fixed and time related charges for specific items in the Preliminaries, those charges must be clearly shown against the items.
- 250 PRICED DOCUMENTS
- Alterations: Do not alter or qualify the priced documents without written consent. Tenders containing unauthorised alterations or qualifications may be rejected.
 - Measurements: All measurement must be ascertained and qualified by the contractor taking into account the information given elsewhere in the tender documents, including for all associated and ancillary work shown or clearly apparent as being necessary for the complete and proper execution of the work.
 - Deemed included: Costs relating to items, which are not priced, will be deemed to have been included elsewhere in the tender.
 - Submit: with the tender.

Total to Collection:
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£



- 300A QUANTITIES IN THE PRICED DOCUMENT
- Must be priced taking into account of the information given elsewhere in the tender documents, including for all associated and ancillary work shown or clearly apparent as being necessary for the complete and proper execution of the work.
 - Pricing must take into account the information ascertained following a visit to the proposed site.
 - The contractor shall ensure that all quantities are based upon all drawing, specifications and actual site measurements. No claim will be entertained with regard to quantities unless the Contractor has specifically notified the CA/ Quantity Surveyor of any discrepancy during the tender period.
- 310 TENDER
- General: 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.
- 350 PC AND PROVISIONAL SUMS
- Contractor's profit on PC Sums: Included in Preliminaries sections A51 and A52, not in the pricing document.
 - Provisional sums and items: Included in Preliminaries sections A53, A54 and A55 not in the pricing document.
 - Submit: A copy of sections A51-A55 (as applicable), priced to include profit, attendance and percentage adjustments with the tender.
- 490 PROGRAMME
- Programme of work: Prepare a detailed programme showing the sequence and timing of the principal parts of the Works. The programme should illustrate all pre-construction and post contract activities including all milestones. Itemise any work which is excluded.
 - Submit: with tender.
- 500 TENDER STAGE METHOD STATEMENTS
- Method statements: Prepare, describing how and when the following is to be carried out:
 - The works.
 - Statements: Submit Within one week of request.
- 510 ALTERNATIVE METHOD TENDERS
- General: In addition to and at the same time as tendering for the Works as defined in the tender documents, alternative methods of construction/ installation may be submitted for consideration. Alternatives, which would involve significant changes to other work, may not be considered.
 - Alternative tenders: Such alternatives will be deemed to be alternative tenders, and each must include a complete and precise statement of the effects on cost and programme.
 - Safety method statement: Carry out a health and safety risk assessment for each alternative and where appropriate provide a safety method statement suitable for incorporation in the Health and Safety Plan.
 - Full technical data: Submit for each alternative together with details of any consequential amendments to the design and/ or construction of other parts of the Works.
- 520 DESIGN DOCUMENTS
- Scope: Include the following in the Contractor's Proposals:
 - Design drawings: as applicable for the contractor's design portion of works
 - Technical information: as applicable for the contractor's design portion of works

Total to Collection:
£

£



- Submit: With tender

550 HEALTH AND SAFETY INFORMATION

- Content: Describe the organisation and resources to safeguard the health and safety of operatives, including those of subcontractors, and of any person whom the works may affect.
- Include:
 - A copy of the contractor's health and safety policy document, including risk assessment procedures.
 - Accident and sickness records for the past five years.
 - Records of previous Health and Safety Executive enforcement action.
 - Records of training and training policy.
 - The number and type of staff responsible for health and safety on this project with details of their qualifications and duties.
- Submit: Within one week of request.

570 OUTLINE CONSTRUCTION PHASE HEALTH AND SAFETY PLAN

- Content: Submit the following information within one week of request:
 - Method statements on how risks from hazards identified in the pre-construction information and other hazards identified by the contractor will be addressed.
 - Details of the management structure and responsibilities.
 - Arrangements for issuing health and safety directions.
 - Procedures for informing other contractors and employees of health and safety hazards.
 - Selection procedures for ensuring competency of other contractors, the self-employed and designers.
 - Procedures for communications between the project team, other contractors and site operatives.
 - Arrangements for cooperation and coordination between contractors.
 - Procedures for carrying out risk assessment and for managing and controlling the risk.
 - Emergency procedures including those for fire prevention and escape.
 - Arrangements for ensuring that all accidents, illness and dangerous occurrences are recorded.
 - Arrangements for welfare facilities.
 - Procedures for ensuring that all persons on site have received relevant health and safety information and training.
 - Arrangements for consulting with and taking the views of people on site.
 - Arrangements for preparing site rules and drawing them to the attention of those affected and ensuring their compliance.
 - Monitoring procedures to ensure compliance with site rules, selection and management procedures, health and safety standards and statutory requirements.
 - Review procedures to obtain feedback.

590 SITE WASTE MANAGEMENT PLAN

- Person responsible for developing the Plan: The Contractor.
- Content: Include details of:
 - Principal Contractor for the purposes of the plan.
 - Location of the site.
 - Description of the project.
 - Estimated project cost.
 - Types and quantities of waste that will be generated.
 - Resource management options for these wastes including proposals for minimization/ reuse/ recycling.
 - The use of appropriate and licensed waste management contractors.
 - Record keeping procedures.

Total to Collection:
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- Waste auditing protocols.
 - Submit with tender.
- 595 ENVIRONMENTAL POLICY
- Employer's Environmental Policy:
 - Develop a system compatible with the Employer' policy.
- 599 FREEDOM OF INFORMATION
- Records: Retain, make available for inspection and supply on request information reasonably required to allow response to requests made under the provisions of the Freedom of Information Act.
 - Determination: Submit requests received. Do not supply information to anyone other than the project participants without express written permission.
 - Confidentiality: Maintain at all times.
- 630 DOMESTIC SUBCONTRACTS
- General: Comply with the Construction Industry Board 'Code of Practice for the selection of subcontractors.
 - List: Provide details of all subcontractors and the work for which they will be responsible.
 - Submit: with tender.
- 631 CONTRACTORS PREFERRED SUB-CONTRACTORS
- List: Provide details of preferred Sub-Contractors..
 - Submit: with tender.

Total to Collection:
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A31 PROVISION, CONTENT AND USE OF DOCUMENTS

DEFINITIONS AND INTERPRETATIONS

- 110 DEFINITIONS
- Meaning: Terms, derived terms and synonyms used in the preliminaries/ general conditions and specification are as stated therein or in the appropriate British Standard or British Standard glossary.
- 120 COMMUNICATION
- Definition: Includes advise, inform, submit, give notice, instruct, agree, confirm, seek or obtain information, consent or instructions, or make arrangements.
 - Format: In writing to the person named in clause A10/140 unless specified otherwise.
 - Response: Do not proceed until response has been received.
- 130 PRODUCTS
- Definition: Materials, both manufactured and naturally occurring, and goods, including components, equipment and accessories, intended for the permanent incorporation in the Works.
 - Includes: Goods, plant, materials, site materials and things for incorporation into the Works.
- 135 SITE EQUIPMENT
- Definition: All appliances or things of whatsoever nature required in or about the construction for completion of the Works but not materials or other things intended to form or forming part of the Permanent Works.
 - Includes: Construction appliances, vehicles, consumables, tools, temporary works, scaffolding, cabins and other site facilities.
- 140 DRAWINGS
- Definitions: To BSRIA BG 6 A design framework for building services. Design activities and drawing definitions.
 - CAD data: In accordance with BS 1192.
- 145 CONTRACTOR'S CHOICE
- Meaning: Selection delegated to the Contractor, but liability to remain with the specifier.
- 150 CONTRACTOR'S DESIGN
- Meaning: Design to be carried out or completed by the Contractor and supported by appropriate contractual arrangements, to correspond with specified requirements.
- 155 SUBMIT PROPOSALS
- Meaning: Submit information in response to specified requirements.
- 160 TERMS USED IN SPECIFICATION
- Remove: Disconnect, dismantle as necessary and take out the designated products or work and associated accessories, fixings, supports, linings and bedding materials. Dispose of unwanted materials. Excludes taking out and disposing of associated pipework, wiring, ductwork or other services.
 - Fix: Receive, unload, handle, store, protect, place and fasten in position and disposal of waste and surplus packaging including all labour, materials and site equipment for that purpose.
 - Supply and fix: As above, but including supply or products to be fixed. All products to be supplied and fixed unless stated otherwise.

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- Keep for reuse: Do not damage designated products or work. Clean off bedding and jointing materials. Stack neatly, adequately protect and store until required by the Employer/ Purchaser or for use in the Works as instructed.
- Make good: Execute local remedial work to designated work. Make secure, sound and neat. Excludes redecoration and/ or replacement.
- Replace: Supply and fix new products matching those removed. Execute work to match original new state of that removed.
- Repair: Execute remedial work to designated products. Make secure, sound and neat. Excludes redecoration and/ or replacement.
- Refix: Fix removed products.
- Ease: Adjust moving parts of designated products or work to achieve free movement and good fit in open and closed positions.
- Match existing: Provide products and work of the same appearance and features as the original, excluding ageing and weathering. Make joints between existing and new work as inconspicuous as possible.
- System: Equipment, accessories, controls, supports and ancillary items, including installation, necessary for that section of the work to function.

170 MANUFACTURER AND PRODUCT REFERENCE

- Definition: When used in this combination:
- Manufacturer: The firm under whose name the particular product is marketed.
- Product reference: The proprietary brand name and/ or reference by which the particular product is identified.
- Currency: References are to the particular product as specified in the manufacture's technical literature current on the date of the invitation to tender.

200 SUBSTITUTION OF PRODUCTS

- Products: If an alternative product to that specified is proposed, obtain approval before ordering the product.
- Reasons: Submit reasons for the proposed substitution.
- Documentation: Submit relevant information, including:
 - manufacturer and product reference;
 - cost;
 - availability;
 - relevant standards;
 - performance;
 - function;
 - compatibility of accessories;
 - proposed revisions to drawings and specification;
 - compatibility with adjacent work;
 - appearance;
 - copy of warranty/ guarantee.
- Alterations to adjacent work: If needed, advise scope, nature and cost.
- Manufacturers' guarantees: If substitution is accepted, submit before ordering products.

210 CROSS REFERENCES

- Accuracy: Check remainder of the annotation or item description against the terminology used in the section or clause referred to.
- Related terminology: Where a numerical cross-reference is not given the relevant sections and clauses of the specification will apply.
- Relevant clauses: Clauses in the referred to specification section dealing with general matters, ancillary products and execution also apply.
- Discrepancy or ambiguity: Before proceeding, obtain clarification or instructions.

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- 220 REFERENCED DOCUMENTS
- Conflicts: Specification prevails over referenced documents.
- 222 DISCLAIMER: This document and its contents have been prepared and are intended solely for the Client's information and use in relation to tender pack. Faithful+Gould assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.
- 225 COPYRIGHT: The copyright of this document is vested in Faithful+Gould. This document may not be reproduced in whole or in part without their express written permission.
- 230 EQUIVALENT PRODUCTS
- Inadvertent omission: Wherever products are specified by proprietary name the phrase 'or equivalent' is to be deemed included.
- 250 CURRENCY OF DOCUMENTS AND INFORMATION
- Currency: References to published documents are to the editions, including amendments and revisions, current on the date of the Invitation to Tender.
- 260 SIZES
- General dimensions: Products are specified by their co-ordinating sizes.
 - Timber: Cross section dimensions shown on drawings are:
 - Target sizes as defined in BS EN 336 for structural softwood and hardwood sections.
 - Finished sizes for non-structural softwood or hardwood sawn and further processed sections.

DOCUMENTS PROVIDED ON BEHALF OF EMPLOYER

- 410 ADDITIONAL COPIES OF DRAWINGS/ DOCUMENTS
- Copies: Two of each contract drawing and contract document will be issued free of charge (not counting any certified copies).
 - Additional copies: Issued on request and charged to the Contractor.
- 440 DIMENSIONS
- Scaled dimensions: Do not rely on.
- 460 THE SPECIFICATION
- Coordination: All sections must be read in conjunction with Main Contract Preliminaries/ General conditions.
- 470 DIVERGENCE FROM THE STATUTORY REQUIREMENTS
- Divergence: Between the drawings or specification and the requirements of the Building Regulations, other Statutes, statutory undertakers and other regulatory authorities.
 - Action: Inform immediately.

DOCUMENTS PROVIDED BY CONTRACTOR/ SUBCONTRACTORS/ SUPPLIERS

- 510 CHANGES/ AMENDMENTS TO EMPLOYER'S REQUIREMENTS
- Contractor's changes to Employer's Requirements: Support request for substitution or variation with all relevant information.
 - Employer's amendments to Employer's Requirements: If considered to involve a variation, which has not already been acknowledged as a variation, notify without delay (maximum

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period 7 days), and do not proceed until instructed. Claims for extra cost, if made after the variation has been carried out, may not be allowed.

- Submit: Two paper copies and one electronic copy to the CA.

600 CONTRACTOR'S DESIGN INFORMATION

- General: Complete the design and detailing of parts of the Works as specified.
- Provide:
 - Production information based on the drawings, specification and other information.
 - Liaison to ensure coordination of the work with related building elements and services.
- Master programme: Make reasonable allowance for completing design/ production information, submission (including information relevant to the CDM Regulations), comment, inspection, amendment, resubmission and reinspection.
- Information required: Submit drawings, specifications and any necessary calculations and product literature.
- Number of copies: Two copies and one electronic copy.
- Submit: with sufficient time for Consultant approvals, possible re-design and changes, placing orders, obtaining and fabricating products, installing, testing and commissioning on site. The Architect, Structural Engineer and Services Engineer require 10 days for approval.

620 AS BUILT DRAWINGS AND INFORMATION

- Contractor designed work: Provide drawings/ information:
- All as built drawings, design, specifications and calculations information.
- Submit: At least two weeks before date for completion.

630 TECHNICAL LITERATURE

- Information: Keep on site for reference by all supervisory personnel:
- Manufacturers' current literature relating to all products to be used in the Works.
- Relevant British, EN or ISO Standards.

640 MAINTENANCE INSTRUCTIONS AND GUARANTEES

- Components and equipment: Obtain or retain copies, register with manufacturer and hand over on or before completion of the Works.
- Information location: In the Building Manual.
- Emergency call out services: Provide telephone numbers for use after completion. Extent of cover: Twenty four hours, seven days a week.

650 ENERGY RATING CALCULATION

- Deliver to: Energy Performance Certificate Assessor and also lodge in the Building Manual.

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A32 MANAGEMENT OF THE WORKS

GENERALLY

- 115 CONSIDERATE CONSTRUCTORS SCHEME
- Registration: Before starting work, register the site and pay the appropriate fee:
 - Contact:
 - Address: Considerate Constructors Scheme Office, PO Box 75, Great Amwell, Ware, Hertfordshire, SG12 0YX.
 - Tel. 01920 485959.
 - Fax. 01920 485958.
 - Free phone 08007831423
 - Web. www.ccscheme.org.uk
 - E mail. enquiries@ccscheme.org.uk
 - Standard: Comply with the Scheme's Code of Considerate Practice.
 - Minimum compliance level: 36.
- 118 FREIGHT VEHICLE SAFETY REQUIREMENTS
- Vehicle equipment: Ensure that all freight vehicles have the following:
 - Audible alert to other road users to the planned movement of the vehicle when the vehicle's indicators are in operation.
 - Prominent signage at the rear of the vehicle to warn cyclists of the dangers of passing the vehicle on the inside.
 - Properly adjusted class VI mirror/s or Fresnel lens to eliminate the nearside blind spot.
 - Side under run guards.
 - Driver training:
 - Drivers must be trained on vulnerable road user safety through an approved course and hold a current valid Certificate of Competence.
 - Drivers must have a valid driving licence and be legally able to drive the vehicle.
- 120 INSURANCE
- Documentary evidence: Submit details before starting work on site and/ or policies and receipts for the insurances required by the Conditions of Contract.
- 125 PROFESSIONAL INDEMNITY INSURANCE
- Provide and maintain insurance in respect of Contractor Designed Works:
 - Level of cover: ~~£5,000,000.00~~ £2,000,000
 - (the expiry date shall be 6 years from the date of practical completion of the Works).
 - Documentary evidence: Submit details before starting work on site and/ or policies and receipts for the insurances required.
- 130 INSURANCE CLAIMS
- Notice: 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, immediately give notice to the Employer, the person named in clause A10/140 and the Insurers.
 - Failure to notify: Indemnify the Employer against any loss, which may be caused by failure to give such notice.
- 140 CLIMATIC CONDITIONS
- Information: Record accurately and retain:
 - Daily maximum and minimum air temperatures (including overnight).

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- Delays due to adverse weather, including description of the weather, types of work affected and number of hours lost.

150 OWNERSHIP

- Alteration/ clearance work: Materials arising become the property of the Contractor except where otherwise stated. Remove from site as work proceeds.

PROGRAMME/ PROGRESS

210 PROGRAMME

- Master programme: Immediately when requested and before starting work on site submit in an approved form a master programme for the Works, which must include details of:
 - Planning and mobilisation by the Contractor.
 - Subcontractor's work.
 - Running in, adjustment, commissioning and testing of all engineering services and installations.
 - Work resulting from instructions issued in regard to the expenditure of provisional sums.
 - Work by others concurrent with the Contract.
 - Submit: Four copies with Tender.

230 SUBMISSION OF PROGRAMME

- Further information: Submission of the programme will not relieve the Contractor of the responsibility to advise of the need for further drawings or details or instructions in accordance with the Contract.

240 COMMENCEMENT OF WORK

- Notice: Before the proposed date for commencement of work on site give minimum notice of 2 weeks.

250 MONITORING

- Progress: Record on a copy of the programme kept on site.
- Avoiding delays: If any circumstances arise which may affect the progress of the Works submit proposals or take other action as appropriate to minimize any delay and to recover any lost time.

258 PROGRESS RECORDS

- General: The Contractor shall maintain and submit to the CA (or as otherwise advised) records of activities in the agreed schedule format each month:
 - The weekly number of persons working on site by trade, sub-contractor, activity and location.
 - Actual start/finish dates of activities and if incomplete the percentage achieved.
 - Interruption to activities.
 - Summary of work performed.
 - Summary of any delays encountered with reasons.

260 SITE MEETINGS

- General: Site meetings will be held to review progress and other matters arising from administration of the Contract.
- Frequency: Fortnightly.
- Location: On site.
- Accommodation: Ensure availability at the time of such meetings.
- Attendees: Attend meetings and inform subcontractors and suppliers when their presence is required.
- Chairperson (who will also take and distribute minutes): CA .

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- 265 CONTRACTOR'S PROGRESS REPORT
- General: Submit a progress report at least 2 days before the site meeting.
 - Content: Notwithstanding the Contractor's obligations under the Contract the report must include:
 - A progress statement by reference to the master programme for the Works.
 - Details of any matters materially affecting the regular progress of the Works.
 - Subcontractors' and suppliers' progress reports.
 - Any requirements for further drawings or details or instructions.
 - Progress Records as detailed under clause A32/258.
- 290 NOTICE OF COMPLETION
- Requirement: Give notice of the anticipated dates of completion of the whole or parts of the Works.
 - Associated works: Ensure necessary access, services and facilities are complete.
 - Period of notice (minimum): 2 weeks.
- 310 EXTENSIONS OF TIME
- Notice: 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.
 - Details: As soon as possible submit:
 - 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.
 - All other relevant information required.

CONTROL OF COST

- 410 CASH FLOW FORECAST
- Submission: Before starting work on site, submit a forecast showing the gross valuation of the Works at the date of each Interim Certificate throughout the Contract period. Base on the programme for the Works.
- 420 REMOVAL/ REPLACEMENT OF EXISTING WORK
- Extent and location: Agree before commencement.
 - Execution: Carry out in ways that minimize the extent of work.
- 430 PROPOSED INSTRUCTIONS
- Estimates: If a proposed instruction requests an estimate of cost, submit without delay and in any case within seven days.
 - A detailed breakdown of the cost, including any allowance for direct loss and expense.
 - Details of any additional resources required.
 - Details of any adjustments to be made to the programme for the Works.
 - Any other information as is reasonably necessary to fully assess the implications of issuing such an instruction.
 - Inability to comply: Inform immediately if it is not possible to comply with any of the above requirements.
- 440 MEASUREMENT
- Covered work: Give notice before covering work required to be measured.

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- 460 INTERIM VALUATIONS
- Will not be considered for inclusion within interim valuations.
- 470 PRODUCTS NOT INCORPORATED INTO THE WORKS
- Ownership: At the time of each valuation, supply details of those products not incorporated into the Works which are subject to any reservation of title inconsistent with passing of property as required by the Conditions of Contract, together with their respective values.
 - Evidence: When requested, provide evidence of freedom of reservation of title.
- 475 PRODUCTS STORED OFF SITE
- Evidence of Title: Submit reasonable proof that the property in items stored off site to be included in valuations is vested in the Contractor.
 - Include for products purchased from a supplier:
 - A copy of the contract of sale.
 - a written statement from the supplier that any conditions of the sale relating to the passing of property have been fulfilled and the products are not subject to any encumbrance or charge.
 - Include for products purchased from a supplier by a subcon-tractor or manufactured or assembled by any subcontractor:
Copies of the subcontract with the subcontractor and a written statement from the subcontractor that any conditions relating to the passing of property have been fulfilled.

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A33 QUALITY STANDARDS/ CONTROL

STANDARDS OF PRODUCTS AND EXECUTIONS

- 110 INCOMPLETE DOCUMENTATION
- General: Where and to the extent that products or work are not fully documented, they are to be:
 - Of a kind and standard appropriate to the nature and character of that part of the Works where they will be used.
 - Suitable for the purposes stated or reasonably to be inferred from the project documents.
 - Contract documents: Omissions or errors in description and/ or quantity shall not vitiate the Contract nor release the Contractor from any obligations or liabilities under the Contract.
- 120 WORKMANSHIP SKILLS
- Operatives: Appropriately skilled and experienced for the type and quality of work.
 - Registration: With Construction Skills Certification Scheme.
 - Evidence: Operatives must produce evidence of skills/ qualifications when requested.
- 130 QUALITY OF PRODUCTS
- Generally: New. (Proposals for recycled products may be considered).
 - Supply of each product: From the same source or manufacturer.
 - Whole quantity of each product required to complete the Works: Consistent in kind, size, quality and overall appearance.
 - Tolerances: Where critical, measure a sufficient quantity to determine compliance.
 - Deterioration: Prevent. Order in suitable quantities to a programme and use in appropriate sequence.
- 135 QUALITY OF EXECUTION
- Generally: Fix, apply, install or lay products securely, accurately, plumb, neatly and in alignment.
 - Colour batching: Do not use different colour batches where they can be seen together.
 - Dimensions: Check on-site dimensions.
 - Finished work: Without defects, e.g. not damaged, disfigured, dirty, faulty, or out of tolerance.
 - Location and fixing of products: Adjust joints open to view so they are even and regular.
- 140 COMPLIANCE
- Compliance with proprietary specifications: Retain on site evidence that the proprietary product specified has been supplied.
 - Compliance with performance specifications: Submit evidence of compliance, including test reports indicating:
 - Properties tested.
 - Pass/ fail criteria.
 - Test methods and procedures.
 - Test results.
 - Identity of testing agency.
 - Test dates and times.
 - Identities of witnesses.
 - Analysis of results.
- 150 INSPECTIONS
- Products and executions: Inspection or any other action must not be taken as approval unless confirmed in writing referring to:
 - Date of inspection.

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- Part of the work inspected.
- Respects or characteristics which are approved.
- Extent and purpose of the approval.
- Any associated conditions.

160 RELATED WORK

- Details: Provide all trades with necessary details of related types of work. Before starting each new type or section of work ensure previous related work is:
 - Appropriately complete.
 - In accordance with the project documents.
 - To a suitable standard.
 - In a suitable condition to receive the new work.
- Preparatory work: Ensure all necessary preparatory work has been carried out.

170 MANUFACTURER'S RECOMMENDATIONS/ INSTRUCTIONS

- General: Comply with manufacturer's printed recommendations and instructions current on the date of the Invitation to tender.
- Changes to recommendations or instructions: Submit details.
- Ancillary products and accessories: Use those supplied or recommended by main product manufacturer.
- Agrément certified products: Comply with limitations, recommendations and requirements of relevant valid certificates.

180 WATER FOR THE WORKS

- Mains supply: Clean and uncontaminated.
- Other: Do not use until:
 - Evidence of suitability is provided.
 - Tested to BS EN 1008 if instructed.

SAMPLES/ APPROVALS

210 SAMPLES

- Products or executions: Comply with all other specification requirements and in respect of the stated or implied characteristics either:
 - To an express approval.
 - To match a sample expressly approved as a standard for the purpose.

220 APPROVAL OF PRODUCTS

- Submissions, samples, inspections and tests: Undertake or arrange to suit the Works programme.
- Approval: Relates to a sample of the product and not to the product as used in the Works. Do not confirm orders or use the product until approval of the sample has been obtained.
- Complying sample: Retain in good, clean condition on site. Remove when no longer required.

230 APPROVAL OF EXECUTION

- Submissions, samples, inspections and tests: Undertake or arrange to suit the Works programme.
- Approval: Relates to the stated characteristics of the sample. (If approval of the finished work as a whole is required this is specified separately). Do not conceal, or proceed with affected work until compliance with requirements is confirmed.
- Complying sample: Retain in good, clean condition on site. Remove when no longer required.

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ACCURACY/ SETTING OUT GENERALLY

- 320 SETTING OUT
- General: Submit details of methods and equipment to be used in setting out the Works.
 - Levels and dimensions: Check and record the results on a copy of drawings. Notify discrepancies and obtain instructions before proceeding.
 - Inform: When complete and before commencing construction.
- 330 APPEARANCE AND FIT
- Tolerances and dimensions: If likely to be critical to execution or difficult to achieve, as early as possible either:
 - Submit proposals; or
 - Arrange for inspection of appearance of relevant aspects of partially finished work.
 - General tolerances (maximum): To BS 5606, tables 1 and 2.
- 340 CRITICAL DIMENSIONS
- Critical dimensions: Set out and construct the Works to ensure compliance with the tolerances stated.
 - Location: Detailed on drawings.
- 350 LEVELS OF STRUCTURAL FLOORS
- Maximum tolerances for designed levels to be:
 - Floors to be self-finished, and floors to receive sheet or tile finishes directly bedded in adhesive: +/- 10 mm.
 - Floors to receive dry board/ panel construction with little or no tolerance on thickness: +/- 10 mm.
 - Floors to receive mastic asphalt flooring/ underlays directly: +/- 10 mm.
 - Floors to receive mastic asphalt flooring/ underlays laid on mastic asphalt levelling coat(s): +/- 15 mm.
 - Floors to receive fully bonded screeds/ toppings/ beds: +/- 15 mm.
 - Floors to receive unbonded or floating screeds/ beds: +/- 20 mm.
- 360 RECORD DRAWINGS
- Site setting out drawing: Record details of all grid lines, setting-out stations, benchmarks and profiles. Retain on site throughout the contract and hand over on completion.

SERVICES GENERALLY

- 410 SERVICES REGULATIONS
- New or existing services: Comply with the Byelaws or Regulations of the relevant Statutory Authority.
- 420 WATER REGULATIONS/ BYELAWS NOTIFICATION
- Requirements: Notify Water Undertaker of any work carried out to or which affects new or existing services and submit any required plans, diagrams and details.
 - Consent: Allow adequate time to receive Undertaker's consent before starting work. Inform immediately if consent is withheld or is granted subject to significant conditions.
- 430 WATER REGULATIONS/ BYELAWS CONTRACTOR'S CERTIFICATE
- On completion of the work: Submit (copy where also required to the Water Undertaker) a certificate including:
 - The address of the premises.
 - A brief description of the new installation and/ or work carried out to an existing installation.
 - The Contractor's name and address.

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- A statement that the installation complies with the relevant Water Regulations or Byelaws.
 - The name and signature of the individual responsible for checking compliance.
 - The date on which the installation was checked.
- 435 ELECTRICAL INSTALLATION CERTIFICATE
- Submit: When relevant electrical work is completed.
 - Original certificate: To be lodged in the Building Manual.
- 440 GAS, OIL AND SOLID FUEL APPLIANCE INSTALLATION CERTIFICATE
- Before the completion date stated in the contract: Submit a certificate stating:
 - The address of the premises.
 - A brief description of the new installation and/ or work carried out to an existing installation.
 - Any special recommendations or instructions for the safe use and operation of appliances and flues.
 - The Contractor's name and address.
 - A statement that the installation complies with the appropriate safety, installation and use regulations.
 - The name, qualification and signature of the competent person responsible for checking compliance.
 - The date on which the installation was checked.
 - Certificate location: Health & Safety File.
- 445 SERVICE RUNS
- General: Provide adequate space and support for services, including unobstructed routes and fixings.
 - Ducts, chases and holes: Form during construction rather than cut.
 - Coordination with other works: Submit details of locations, types/ methods of fixing of services to fabric and identification of runs and fittings.
- 450 MECHANICAL AND ELECTRICAL SERVICES
- Final tests and commissioning: Carry out so that services are in full working order at completion of the Works.
 - Building Regulations notice: Copy to be lodged in the Building Manual.

SUPERVISION/ INSPECTION/ DEFECTIVE WORK

- 525 ACCESS
- Extent: Provide at all reasonable times access to the Works and to other places of the Contractor or subcontractors where work is being prepared for the Contract.
- 530 OVERTIME WORKING
- Notice: Prior to overtime being worked, submit details of times, types and locations of work to be done.
 - Minimum period of notice: 5 days.
 - Concealed work: If executed during overtime for which notice has not been given, it may be required to be opened up for inspection and reinstated at the Contractor's expense.
- 540 DEFECTS IN EXISTING WORK
- Undocumented defects: When discovered, immediately give notice. Do not proceed with affected related work until response has been received.
 - Documented remedial work: Do not execute work which may:
 - Hinder access to defective products or work; or
 - Be rendered abortive by remedial work.

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- 560 TESTS AND INSPECTIONS
- Timing: Agree and record dates and times of tests and inspections to enable all affected parties to be represented.
 - Confirmation: One working day prior to each such test or inspection. If sample or test is not ready, agree a new date and time.
 - Records: Submit a copy of test certificates and retain copies on site.
- 570 AIR PERMEABILITY
N/A
- 580 CONTINUITY OF THERMAL INSULATION
- Record and report: Confirm that work to new, renovated or upgraded thermal elements has been carried out to conform to specification. Include:
 - The address of the premises.
 - The Contractor's name and address.
 - The name, qualification and signature of the competent person responsible for checking compliance.
 - The date on which the installation was checked.
 - Submit: Before completion of the Works.
 - Copy: To be lodged in the Building Manual.
- 590 RESISTANCE TO PASSAGE OF SOUND
- Method: Robust standard details .
 - Compliance: Results of testing .
 - Copies: Incorporate in the Building Manual.
- 595 ENERGY PERFORMANCE CERTIFICATE
- Assessment: Undertaken by a member of an approved accreditation scheme. Submit details of scheme name and evidence of qualifications when requested.
 - Building Type: Dwelling .
 - Method: Simplified Building Energy Model.
 - Format:
 - Certificate: To be incorporated in the Building Manual.
 - Submit: Before the date for completion stated in the contract.
- 610 PROPOSALS FOR RECTIFICATION OF DEFECTIVE PRODUCTS/ EXECUTIONS
- Proposals: Immediately any execution or product is known, or appears, to be not in accordance with the Contract, submit proposals for opening up, inspection, testing, making good, adjustment of the Contract Sum, or removal and re-execution.
 - Acceptability: Such proposals may be unacceptable and contrary instructions may be issued.

WORK AT OR AFTER COMPLETION

- 710 WORK BEFORE COMPLETION
- General: Make good all damage consequent upon the Works.
 - Temporary markings, coverings and protective wrappings: Remove unless otherwise instructed.
 - Cleaning: Clean the Works thoroughly inside and out, including all accessible ducts and voids. Remove all splashes, deposits, efflorescence, rubbish and surplus materials.
 - Cleaning materials and methods: As recommended by manufacturers of products being cleaned, and must not damage or disfigure other materials or construction.
 - COSHH dated data sheets: Obtain for all materials used for cleaning and ensure they are used only as recommended by their manufacturers.

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- Minor faults: Touch up in newly painted work, carefully matching colour and brushing out edges. Repaint badly marked areas back to suitable breaks or junctions.
- Moving parts of new work: Adjust, ease and lubricate as necessary to ensure easy and efficient operation, including doors, windows, drawers, ironmongery, appliances, valves and controls.

716 DEFECTS AT COMPLETION

- General: It is in the interest of both parties that all known defects are corrected prior to handover of the building. The award of Practical Completion when defects exist will be at the discretion of the CA on the basis that defects and subsequent rectification that do exist do not stop the Employer from fully and conveniently using the Works.
- Should there be a defect in the Works that affects operations, any reasonable works associated with mitigating the affects of the defect can be charged back to the Contractor.
- The correction of post completion defects by the Contractor will be at the convenience of the Employer and will be centred around business as usual operations. This may mean evening and weekend works to correct them. It is in the interest of the project that all defects are corrected prior to completion.
- Should the Contractor fail to respond to the notification of a critical defect (one that affects business as usual operations) within 24 hours confirming a suitable plan of action for correction then the Employer will be entitled to correct the defect themselves contra charging the Contractor for the Works.
- Should the Contractor confirm a plan of action for correction but fail to attend site to mitigate the effects of a defect or to correct the defect within a reasonable amount of time the Employer will be entitled to commission the correction themselves contra charging the Contractor for the cost.

720 SECURITY AT COMPLETION

- General: Leave the Works secure with, where appropriate, all accesses closed and locked.
- Keys: Account for and adequately label all keys and hand over to Employer with itemised schedule, retaining duplicate schedule signed by Employer as a receipt.

730 MAKING GOOD DEFECTS

- Remedial work: Arrange access with CA.
- Rectification: Give reasonable notice for access to the various parts of the Works.
- Completion: Notify when remedial works have been completed.

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A34 SECURITY/ SAFETY/ PROTECTION

SECURITY, HEALTH AND SAFETY

- 110 PRECONSTRUCTION INFORMATION
- Location: Integral with the project Preliminaries, including but not restricted to the following sections:
 - Description of project: Sections A10 and A11.
 - Client's consideration and management requirements: Sections A12, A13 and A36.
 - Environmental restrictions and on-site risks: Section A12, A35 and A34.
 - Significant design and construction hazards: Section A34.
 - The Health and Safety File: Section A37.
- 120 EXECUTION HAZARDS
- Common hazards: Not listed. Control by good management and site practice.
 - Significant hazards: Refer to the Pre Construction Information.
- 130 PRODUCT HAZARDS
- Hazardous substances: Site personnel levels must not exceed occupational exposure standards and maximum exposure limits stated in the current version of HSE document EH40: Workplace Exposure Limits.
 - Common hazards: Not listed. Control by good management and site practice.
 - Significant hazards: Refer to Pre Construction Information.
- 140 CONSTRUCTION PHASE HEALTH AND SAFETY PLAN
- Submission: Present to the Employer/ Client no later than two weeks before commencement of work on site.
 - Confirmation: Do not start construction work until the Employer has confirmed in writing that the Construction Phase Health and Safety Plan includes the procedures and arrangements required by CDM Regulations.
 - Content: Develop the plan from and draw on the Outline Construction Phase Health and Safety Plan, clause A30/570, and the Pre-tender Health and Safety Plan/ Preconstruction information.
- 150 SECURITY
- Protection: Safeguard the site, the Works, products, materials, and any existing buildings affected by the Works from damage and theft.
 - Access: Take all reasonable precautions to prevent unauthorized access to the site, the Works and adjoining property.
- 160 STABILITY
- Responsibility: Maintain the stability and structural integrity of the Works and adjacent structures during the Contract.
 - Design loads: Obtain details, support as necessary and prevent overloading.
- 170 OCCUPIED PREMISES
- Extent: Existing buildings will be occupied and/ or used during the Contract as follows: all buildings and facilities near the site will be in use/ occupied for the duration of the contract period.
 - Works: Carry out without undue inconvenience and nuisance and without danger to occupants and users.
 - Overtime: If compliance with this clause requires certain operations to be carried out during overtime, and such overtime is not required for any other reason, the extra cost will be allowed, provided that such overtime is authorized in advance.

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- 210 EMPLOYER'S REPRESENTATIVES SITE VISITS
- Safety: Submit details in advance, to the Employer or the person identified in clause A10/140, of safety provisions and procedures (including those relating to materials, which may be deleterious), which will require their compliance when visiting the site.
 - Protective clothing and/ or equipment: Provide and maintain on site for the Employer and the person stated in clause A10/140 and other visitors to the site.

- 220 WORKING PRECAUTIONS/ RESTRICTIONS
- Refer to the Pre Constuction Information.

PROTECT AGAINST THE FOLLOWING

- 330 NOISE AND VIBRATION
- Standard: Comply with the recommendations of BS 5228-1, in particular clause 7.3, to minimize noise levels during the execution of the Works.
 - Noise levels from the works: Maximum level: 50 dB(A) when measured from the boundary of the site.
 - Equipment: Fit compressors, percussion tools and vehicles with effective silencers of a type recommended by manufacturers of the compressors, tools or vehicles.
 - Restrictions: Do not use:
 - Radios or other audio equipment or permit employees to use in ways or at times that may cause nuisance.

- 340 POLLUTION
- Prevention: Protect the site, the Works and the general environment including the atmosphere, land, streams and waterways against pollution.
 - Contamination: If pollution occurs inform immediately, including to the appropriate Authorities and provide relevant information.

- 350 PESTICIDES
- Use: Not permitted.

- 350 PESTICIDES
- Use: Only where specified or approved, and then only suitable products listed on www.pesticides.gov.uk.
 - Restrictions: Work near water, drainage ditches or land drains must comply with the 'Guidelines for the use of herbicides on weeds in or near watercourses and lakes'.
 - Containers: Comply with manufacturer's disposal recommendations. Remove from site immediately empty or no longer required.
 - Competence: Operatives must hold a BASIS Certificate of Competence, or work under supervision of a Certificate holder.

- 360 NUISANCE
- Duty: Prevent nuisance from smoke, dust, rubbish, vermin and other causes.
 - Surface water: Prevent hazardous build-up on site, in excavations and to surrounding areas and roads.

- 370 ASBESTOS CONTAINING MATERIALS
- Duty: Report immediately any suspected materials discovered during execution of the Works.
 - Do not disturb.
 - Agree methods for safe removal or encapsulation.

Total to Collection:
£

£



- 371 DANGEROUS OR HAZARDOUS SUBSTANCES
- Duty: Report immediately suspected materials discovered during execution of the Works.
 - Do not disturb.
 - Agree methods for safe removal or remediation.
- 375 ANTIQUITIES
- Duty: Report immediately any fossils, antiquities and other objects of interest or value discovered during execution of the works.
 - Preservation: Keep objects in the exact position and condition in which they were found.
- 380 FIRE PREVENTION
- Duty: Prevent personal injury or death, and damage to the Works or other property from fire.
 - Standard: Comply with Joint Code of Practice 'Fire Prevention on Construction Sites', published by Construction Industry Publications and The Fire Protection Association (The 'Joint Fire Code').
- 390 SMOKING ON SITE
- Smoking on site: Not permitted.
- 400 BURNING ON SITE
- Burning on site: Not permitted.
- 410 MOISTURE
- Wetness or dampness: Prevent, where this may cause damage to the Works.
 - Drying out: Control humidity and the application of heat to prevent:
 - Blistering and failure of adhesion.
 - Damage due to trapped moisture.
 - Excessive movement.
- 420 INFECTED TIMBER/ CONTAMINATED MATERIALS
- Removal: Where instructed to remove materials affected by fungal/ insect attack from the building, minimize the risk of infecting other parts of the building.
 - Testing: Carry out and keep records of appropriate tests to demonstrate that hazards presented by concentrations of airborne particle, toxins and other micro organisms are within acceptable levels.
- 430 WASTE
- Includes: Rubbish, debris, spoil, surplus material, containers and packaging.
 - General: Minimize production. Prevent accumulations. Keep the site and Works clean and tidy.
 - Handling: Collect and store in suitable containers. Remove frequently and dispose off site in a safe and competent manner:
 - Non-hazardous material: In a manner approved by the Waste Regulation Authority.
 - Hazardous material: As directed by the Waste Regulation Authority and in accordance with relevant regulations.
 - Recyclable material: Sort and dispose at a Materials Recycling Facility approved by the Waste Regulation Authority.
 - Voids and cavities in the construction: Remove rubbish, dirt and residues before closing in.
 - Waste transfer documentation: Retain on site.
- 440 ELECTROMAGNETIC INTERFERENCE
- Duty: Prevent excessive electromagnetic disturbance to apparatus outside the site.

Total to Collection:
£

£



470 INVASIVE SPECIES

- General: Prevent the spread of species (e.g. plants or animals) that may adversely affect the site or Works economically, environmentally or ecologically.
- Duty: Report immediately any suspected species discovered during execution of the Works.
- Do not disturb.
- Agree methods for safe eradication or removal.

PROTECT THE FOLLOWING

510 EXISTING SERVICES

- Confirmation: Notify all service authorities, statutory undertakers and/ or adjacent owners of proposed works not less than one week before commencing site operations.
- Identification: Before starting work, check and mark positions of utilities/ services. Where positions are not shown on drawings obtain relevant details from service authorities, statutory undertakers or other owners.
- Work adjacent to services:
- Comply with service authority's/ statutory undertaker's recommendations.
- Adequately protect, and prevent damage to services: Do not interfere with their operation without consent of service authorities/ statutory undertakers or other owners.
- Identifying services:
- Below ground: Use signboards, giving type and depth;
- Overhead: Use headroom markers.
- Damage to services: If any results from execution of the Works:
- Immediately give notice and notify appropriate service authority/ statutory undertaker.
- Make arrangements for the work to be made good without delay to the satisfaction of service authority/ statutory undertaker or other owner as appropriate.
- Any measures taken to deal with an emergency will not affect the extent of the Contractor's liability.
- Marker tapes or protective covers: Replace, if disturbed during site operations to service authority's/ statutory undertakers recommendations.

520 ROADS AND FOOTPATHS

- Duty: Maintain roads and footpaths within and adjacent to the site and keep clear of mud and debris.
- Damage caused by site traffic or otherwise consequent upon the Works: Make good to the satisfaction of the Employer, Local Authority or other owner.

530 EXISTING TOPSOIL/ SUBSOIL

- Duty: Prevent over compaction of existing topsoil and subsoil in those areas which may be damaged by construction traffic, parking of vehicles, temporary site accommodation or storage of materials and which will require reinstatement prior to completion of the Works.
- Protection: Before starting work submit proposals for protective measures.

540 RETAINED TREES/ SHRUBS/ GRASSED AREAS

- Protection: Preserve and prevent damage, except those not required.
- Replacement: Mature trees and shrubs if uprooted, destroyed, or damaged beyond reasonable chance of survival in their original shape, as a consequence of the Contractor's negligence, must be replaced with those of a similar type and age at the Contractor's expense.

560 EXISTING FEATURES

- Protection: Prevent damage to existing buildings, fences, gates, walls, roads, paved areas and other site features, which are to remain in position during execution of the Works.

Total to Collection:
£

£



- 570 EXISTING WORK
- Protection: Prevent damage to existing work, structure or other property during the course of the work.
 - Removal: Minimum amount necessary.
 - Replacement work: To match existing.
- 580 BUILDING INTERIORS
- Protection: Prevent damage from exposure to the environment, including weather, flora, fauna, and other causes of material degradation during the course of the work.
- 625 ADJOINING PROPERTY RESTRICTIONS
- Precautions:
 - Prevent trespass of workpeople and take precautions to prevent damage to adjoining property.
 - Pay all charges.
 - Remove and make good on completion or when directed.
 - Damage: Bear cost of repairing damage arising from execution of the Works.
- 630 EXISTING STRUCTURES
- Duty: Check proposed methods of work for effects on adjacent structures inside and outside the site boundary.
 - Supports: During execution of the Works:
 - Provide and maintain all incidental shoring, strutting, needling and other supports as may be necessary to preserve stability of existing structures on the site or adjoining, that may be endangered or affected by the Works.
 - Do not remove until new work is strong enough to support existing structure.
 - Prevent overstraining of completed work when removing supports.
 - Adjacent structures: Monitor and immediately report excessive movement.
 - Standard: Comply with BS 5975 and BS EN 12812.
- 640 MATERIALS FOR RECYCLING/ REUSE
- Duty: Sort and prevent damage to stated products or materials, clean off bedding and jointing materials and other contaminants.
 - Storage: Stack neatly and protect until required by the Employer or for use in the Works as instructed.

Total to Collection:
£

£



A35 SPECIFIC LIMITATIONS ON METHOD/ SEQUENCE/ TIMING

130 METHOD/ SEQUENCE OF WORK
N/A

170 WORKING HOURS

- Specific limitations: During the Works, no operations which are audible at the site boundary shall be carried out:
 - (i) Outside the hours of 0800 to 1800 weekdays
 - (ii) Outside the hours of 0800 to 1300 Saturdays, and
 - (iii) At any time on Sundays or Bank Holidays

Out of hours working is possible, strictly by prior arrangement.

Total to Collection:
£

£



A36 FACILITIES/ TEMPORARY WORKS/ SERVICES

GENERALLY

110 SPOIL HEAPS, TEMPORARY WORKS AND SERVICES

- Location: Give notice of intended siting.
- Maintenance: Alter, adapt and move as necessary. Remove when no longer required and make good.

ACCOMMODATION

230 TEMPORARY ACCOMMODATION

- Proposals for temporary accommodation and storage for the Works: Submit two weeks prior to starting on site.
- Details to be included: Type of accommodation and storage, its siting and the programme for site installation and removal.

TEMPORARY WORKS

310 ROADS

- Permanent roads, hard standings and footpaths on the site: The following may be used, subject to clause A34/520:
- Details: Dawlish Drive will be the access route to site.
- Restrictions on use: The access road is to remain open for use by the public.

320 TEMPORARY WORKS

- Employer's Specific Requirements: Provide: Allow for providing a heras fencing to perimeter of the site, adequately supported to ensure stability in strong winds.

340 NAME BOARDS/ ADVERTISEMENTS

- Name boards/ advertisements: Not permitted.

SERVICES AND FACILITIES

410 LIGHTING

- Finishing work and inspection: Provide temporary lighting, the intensity and direction of which closely resembles that delivered by the permanent installation.

420A LIGHTING AND POWER

- The Contractor shall arrange for connecting to Employer's existing electrical supply. Contractor to provide route for the electrical supply to site and to provide for separate metering. Contractor to allow for distribution of services to site and within site as necessary. All costs for supply and consumption to be borne by the Contractor. The Employer will not be responsible for the consequences of failure or restriction in supply.

430 WATER

- The Contractor shall arrange for connecting to Employer's existing water supply. Contractor to provide route for the water supply to site and to provide for separate metering. Contractor to allow for distribution of services to site and within site as necessary. All costs for supply and consumption to be borne by the Contractor. The Employer will not be responsible for the consequences of failure or restriction in supply.

Total to Collection:
£

£



- 440 TELEPHONES
- Direct communication: As soon as practicable after the Date of Possession provide the Contractor's person in charge with a mobile telephone.
- 520 USE OF PERMANENT HEATING SYSTEM
- Permanent heating installation: May be used for drying out the Works/ services and controlling temperature and humidity levels.
 - Installation: If used:
 - Take responsibility for operation, maintenance and remedial work.
 - Arrange supervision by and indemnification of the appropriate Subcontractors.
 - Pay costs arising.
- 530 BENEFICIAL USE OF INSTALLED SYSTEMS
- Permanent systems: Permanent systems: Unless specific permission is given by the Employer and installer, do not use for any purpose other than running in, testing and commissioning.
- 540 METER READINGS
- Charges for service supplies: Where to be apportioned ensure that:
 - Meter readings are taken by relevant authority at possession and/ or completion as appropriate.
 - Copies of readings are supplied to interested parties.
- 550 THERMOMETERS
- General: Provide on site and maintain in accurate condition a maximum and minimum thermometer for measuring atmospheric shade temperature, in an approved location.
- 570 PERSONAL PROTECTIVE EQUIPMENT
- General: Provide for the sole use of those acting on behalf of the Employer, in sizes to be specified:
 - Safety helmets to BS EN 397, neither damaged nor time expired. Number required: 5.
 - High visibility waistcoats to BS EN ISO 20471 Class 2. Number required: 5.
 - Safety boots with steel insole and toecap to BS EN ISO 20345. Pairs required: 5.
 - Disposable respirators to BS EN 149.FFP1S.
 - Eye protection to BS EN 166.
 - Ear protection - muffs to BS EN 352 - 1, plugs to BS EN 352 – 2.
 - Hand protection - to BS EN 388, 407, 420 or 511 as appropriate.

Total to Collection:
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A37 OPERATION/ MAINTENANCE OF THE FINISHED WORKS

GENERALLY

110 THE BUILDING MANUAL

- Purpose: The Manual is to be a comprehensive information source and guide for owners and users of the completed Works. It should provide an overview of the main design principles and describe key components and systems to enable proper understanding, efficient and safe operation and maintenance.
- Scope:
 - Part 1: General: [Content as clause 120].
 - Part 2: Fabric: [Content as clause 130].
 - Part 3: Services: [Content as clause 140].
 - Part 4: The Health and Safety File: [prepared and supplied by the CDM Coordinator]. [Content as clause 150].
- Responsibility: The Building Manual is to be produced by the Contractor and must be complete no later than 2 weeks prior to Practical Completion.
- Information provided by others: Details: To be confirmed.
- Compilation:
 - Prepare all information for Contractor designed or performance specified work including as-built drawings.
 - Obtain or prepare all other information to be included in the Manual.
 - Reviewing the Manual: Submit a complete draft. Amend in the light of any comments and resubmit. Do not proceed with production of the final copies until authorized.
- Final copies of the Manual:
 - Number of copies: 1.
 - Format: Hard copies in A4 size lever arch files with drawings folded for inclusion in the file. Plus an electronic copy.
 - Latest date for submission: Two weeks before the date for completion stated in the contract.
- As-built drawings and schedules:
 - Number of copies: 1.
 - Format: Hard copies in A4 size lever arch files with drawings folded for inclusion in the file.

120 CONTENT OF THE BUILDING MANUAL PART 1: GENERAL

- Content: Obtain and provide the following, including all relevant details not included in other parts of the manual:
 - Index: list the constituent parts of the manual, together with their location in the document.
- The Works:
 - Description of the buildings and facilities.
 - Ownership and tenancy, where relevant.
 - Health and Safety information – other than that specifically required by the Construction (Design and Management) Regulations.
- The Contract:
 - Names and addresses and contact details of all significant consultants, contractors, subcontractors, suppliers and manufacturers.
 - Overall design criteria.
 - Environmental performance requirements.
 - Relevant authorities, consents and approvals.
 - Third party certification, such as those made by 'competent' persons in accordance with the Building Regulations.
 - Operational requirements and constraints of a general nature:
 - Maintenance contracts and contractors.

Total to Collection:
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- Fire safety strategy for the buildings and the site. Include drawings showing emergency escape and fire appliance routes, fire resisting doors location of emergency alarm and fire fighting systems, services, shut off valves switches, etc.
 - Emergency procedures and contact details in case of emergency.
 - Other specific requirements: To be advised.
 - Description and location of other key documents.
 - Timescale for completion: Two weeks before the date of Practical Completion.
- 130 CONTENT OF THE BUILDING MANUAL PART 2: BUILDING FABRIC
- Content: Obtain and provide the following, including all relevant details not included in other parts of the manual:
 - Detailed design criteria, including:
 - Floor and roof loadings.
 - Durability of individual components and elements.
 - Loading restrictions.
 - Insulation values.
 - Fire ratings.
 - Other relevant performance requirements.
 - Construction of the building:
 - A detailed description of methods and materials used.
 - As-built drawings recording the construction, together with an index.
 - Information and guidance concerning repair, renovation or demolition/ deconstruction.
 - Periodic building maintenance guide chart.
 - Inspection reports.
 - Manufacturer's instructions index, including relevant COSHH data sheets and recommendations for cleaning, repair and maintenance of components.
 - Fixtures, fittings and components schedule and index.
 - Guarantees, warranties and maintenance agreements – obtain from manufacturers, suppliers and subcontractors.
 - Test certificates and reports required in the specification or in accordance with legislation, including:
 - Air permeability.
 - Resistance to passage of sound.
 - Continuity of insulation.
 - Electricity and Gas safety.
 - Other specific requirements: To be advised.
 - Timescale for completion: Two weeks prior to Practical Completion.
- 140 CONTENT OF THE BUILDING MANUAL PART 3: BUILDING SERVICES
- Content: Obtain and provide the following, including all relevant details not included in other parts of the manual:
 - Detailed design criteria and description of the systems, including:
 - Services capacity, loadings and restrictions.
 - Services instructions.
 - Services log sheets.
 - Manufacturers' instruction manuals and leaflets index.
 - Fixtures, fittings and component schedule index.
 - Detailed description of methods and materials used.
 - As-built drawings for each system recording the construction, together with an index, including:
 - Diagrammatic drawings indicating principal items of plant, equipment and fittings.
 - Record drawings showing overall installation.
 - Schedules of plant, equipment, valves, etc. describing location, design performance and unique identification cross referenced to the record drawings.
 - Identification of services – a legend for colour coded services.

Total to Collection:
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- Product details, including for each item of plant and equipment:
 - Name, address and contact details of the manufacturer.
 - Catalogue number or reference.
 - Manufacturer's technical literature, including detailed operating and maintenance instructions.
 - Information and guidance concerning dismantling, repair, renovation or decommissioning.
 - Operation: A description of the operation of each system, including:
 - Starting up, operation and shutting down.
 - Control sequences.
 - Procedures for seasonal changeover.
 - Procedures for diagnostics, troubleshooting and faultfinding.
 - Guarantees, warranties and maintenance agreements – obtain from manufacturers, suppliers and subcontractors.
 - Commissioning records and test certificates list for each item of plant, equipment, valves, etc. used in the installations – including:
 - Electrical circuit tests.
 - Corrosion tests.
 - Type tests.
 - Work tests.
 - Start and commissioning tests.
 - Equipment settings: Schedules of fixed and variable equipment settings established during commissioning.
 - Preventative maintenance: Recommendations for frequency and procedures to be adopted to ensure efficient operation of the systems.
 - Lubrication: Schedules of all lubricated items.
 - Consumables: A list of all consumable items and their source.
 - Spares: A list of recommended spares to be kept in stock, being those items subject to wear and tear or deterioration and which may involve an extended delivery time when replacements are required.
 - Emergency procedures for all systems, significant items of plant and equipment.
 - Annual maintenance summary chart.
 - Other specific requirements: to be advised.
 - Timescale for completion: Two weeks prior to Practical Completion.
- 150 CONTENT OF THE BUILDING MANUAL PART 4: THE HEALTH AND SAFETY FILE
- Content: obtain and provide the following, including all relevant details not included in other parts of the manual, including:
 - residual hazards and how they have been dealt with.
 - hazardous materials used.
 - information regarding the removal or dismantling of installed plant and equipment.
 - health and safety information about equipment provided for cleaning or maintaining the structure.
 - the nature, location and markings of significant services.
 - information and as-built drawings of the structure, its plant and equipment.
 - Information prepared by others: Details: to be advised.
 - Timescale for completion: Two weeks prior to Practical Completion.
 - Submit to: the CDM Co-ordinator.
- 151 CONTENT OF THE BUILDING MANUAL PART 5: THE BUILDING USER GUIDE
- Content: Obtain and provide the following:
 - Building services information.
 - Emergency information.
 - Energy & environmental strategy.
 - Water use.
 - Transport facilities.

Total to Collection:
£

£

- Materials & waste policy.
 - Re-fit/ re-arrangement considerations.
 - Reporting provision.
 - Training.
 - Links & references.
 - Other specific requirements: to be advised.
 - Timescale for completion: Two weeks prior to Practical Completion.
- 160 PRESENTATION OF BUILDING MANUAL
- Format: A4 size, plastics covered, loose leaf, four ring binders with hard covers, each indexed, divided and appropriately cover titled.
 - Selected drawings needed to illustrate or locate items mentioned in the Manual: Where larger than A4, to be folded and accommodated in the binders so that they may be unfolded without being detached from the rings.
 - As-built drawings: The main sets may form annexes to the Manual
- 155 CONTENT OF THE BUILDING MANUAL
- General: Details of the property, the parties, fire safety strategy, operational requirements and constraints of a general nature.
 - Building fabric: Design criteria, maintenance details, product details, and environmental and trafficking conditions.
 - Building services: Description and operation of systems, diagrammatic drawings, record drawings, identification of services, product details, equipment settings, maintenance schedules, consumable items, spares and emergency procedures.
 - Documentation: Guarantees, warranties, maintenance agreements, test certificates and reports.
- 160 PRESENTATION OF BUILDING MANUAL
- Format: A4 size, plastics covered, loose leaf, four ring binders with hard covers, each indexed, divided and appropriately cover titled.
 - Selected drawings needed to illustrate or locate items mentioned in the Manual: Where larger than A4, to be folded and accommodated in the binders so that they may be unfolded without being detached from the rings.
 - As-built drawings: The main sets may form annexes to the Manual.
- 190 MAINTENANCE SERVICE
- Scope: Provide a comprehensive maintenance service for the following items of plant and equipment: Include all planned preventative maintenance, as set out within the maintenance schedule and replacement of all consumable items.

Total to Collection:
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A40 CONTRACTOR'S GENERAL COST ITEMS: MANAGEMENT AND STAFF

110 MANAGEMENT AND STAFF
- N/A

Total to Collection:
£

£



A41 CONTRACTOR'S GENERAL COST ITEMS: SITE ACCOMMODATION

110 SITE ACCOMMODATION

- Details: Site accommodation required or made/ not made available by the Employer: See section A36.

Total to Collection:
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£



A42 CONTRACTOR'S GENERAL COST ITEMS: SERVICES AND FACILITIES

110 SERVICES AND FACILITIES

- Details: Services or facilities required or made/ not made available by the Employer: See section A36.

Total to Collection:
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A43 CONTRACTOR'S GENERAL COST ITEMS: MECHANICAL PLANT

110 MECHANICAL PLANT.

Total to Collection:
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A44 CONTRACTOR'S GENERAL COST ITEMS: TEMPORARY WORKS

110 TEMPORARY WORKS

- Details: Temporary works required or made/ not made available by the Employer: See section A36.

Total to Collection:
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A54 PROVISIONAL WORK/ ITEMS

110 PROVISIONAL SUMS FOR DEFINED WORK

Detailed with Works schedule item - 13 Provisional Sums & Contingencies

Total to Collection:
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COLLECTION

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Total to Collection:
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3. Schedule of Works

SECTION 3 SCHEDULE OF WORKS

Schedule of Works

DOCUMENT USE: Contractor is responsible for applying and verifying all arithmetical formulas to this excel document to safeguard the validity of their own tender.

Item	Description of Work	Quantity	Unit	Rate	Costs
1	<u>GENERAL WORKS</u>				
1.1	The work schedule is to be read in conjunction with all relevant Unitas' Standard Specification documentation and all relevant Codes of Practice and British Standards in relation to the refurbishment works. The Construction drawings and included specification is indicative only, not exhaustive, and is to be used only as a minimum common basis for pricing.				
1.2	This Schedule of Works is to be read in conjunction with the associated preliminaries, workmanship and materials sections of the tender document. Strict adherence to the requirements for the methods of working will be necessary at all times.				
1.3	This Schedule of Works is to be read in conjunction with Tender Drawings: ref: 5181996-01-001 - 01-019				
1.4	The contractor should allow all necessary work to comply with the above. The contractor should satisfy themselves to the full extent of the works prior to returning their price schedule of works, as no additional costs will be accepted attributable to site conditions.				
1.5	Any quantities contained within this section of the tender document are for tendering purposes only. Any quantities derived from this information should be considered an estimate only. The contractor must ascertain precise actual quantities by site inspection. As the quantities and descriptions contained within this document have not been prepared in accordance with any Standard Method of Measurement.				
1.6	Any rates tendered should include for all works reasonably associated with the item, and the Contractor should determine the best manner to carry out the works.				

SECTION 3 SCHEDULE OF WORKS

Schedule of Works

DOCUMENT USE: Contractor is responsible for applying and verifying all arithmetical formulas to this excel document to safeguard the validity of their own tender.

1.7	All demolitions and breaking up items are deemed to include the associated disposal off site.				
1.8	The contract will be carried out in line with the Construction (Design and Management) Regulations 2015.				
1.9	All works are to be carried out in a competent and workmanlike manner. The site shall be kept clean and tidy at all times.				
1.10	The Contractor is to provide all relevant risk assessments and method statements to conduct the works and protect the site and buildings in a safe and methodical manner, to the CA prior to the commencement of works.				
1.11	The Contractor is to allow for all temporary services as required to carry out the works in a safe and working environment.				
1.12	<p>The Contractor shall include for the provision of temporary scaffolding for the duration of the works, static lines, harnesses and any other access equipment which may reasonably be required to undertake the works.</p> <p>Access equipment to fully comply with the Health & Safety at Work etc. Act 1974 and Working at Height Regulations 2005, with edge protection to the perimeter of the scaffold, in accordance with all current legislation, statutory regulations and Approved Codes of Practice.</p> <p>All access equipment must be inspected by a competent person on a weekly basis, in particular following inclement weather, where all inspections should be recorded and copies forward to the Contract Administrator.</p>				
1.13	All window and door references should be read in conjunction with the Tender Drawings.				

9-11 The Square Residential Conversion Works



SECTION 3 SCHEDULE OF WORKS

Schedule of Works

DOCUMENT USE: Contractor is responsible for applying and verifying all arithmetical formulas to this excel document to safeguard the validity of their own tender.

1.14	<p>The Contractor is to allow for all necessary preliminaries and site set-up as required to undertake the stated works within this Schedule. The Contractor is to list the preliminaries and site set-up requirements separately at the end of this Schedule.</p> <p>Note: Sequence of programmed works to be engineered to minimise disruption to adjacent and nearby residents. This schedule of work does not define the sequence of work. Programme and sequence to be submitted to PM and client for approval prior to works commencing.</p>				
1.15	All Mechanical and Electrical items are deemed to include builders work in connection with those items.				
1.16	Products specified may be substituted for another of equivalent or superior standard only on the approval of the Contract Administrator (CA) after submittance of product specification. The colour finishes are to be agreed with the Employer prior to commencement.				
1.17	The Contractor will be responsible for supplying and displaying all necessary 'NO ACCESS' notices and barriers during the progress of the work and for the settlement of any claim for damage to any person or property.				

SECTION 3 SCHEDULE OF WORKS

Schedule of Works

DOCUMENT USE: Contractor is responsible for applying and verifying all arithmetical formulas to this excel document to safeguard the validity of their own tender.

Item	Description of Work	Quantity	Unit	Rate	Costs
2	<u>ENABLING WORKS</u>				
2.1	Asbestos Based Materials				
2.1.1	Stop work and report immediately to the Contract Administrator if any suspected asbestos based materials are discovered during the works that have not been identified already. Avoid disturbing such materials and agree with CA a safe method of removal / encapsulation. Work can only commence following the written approval of the CA.				
2.1.2	Prior to undertaking any works, all existing asbestos records and reports are to be reviewed, and refurbishment and demolition surveys undertaken at the contractors expense in areas which have not been covered by the clients existing asbestos information. Asbestos may have been identified within the working areas and therefore all necessary precautions should be undertaken. All asbestos removal works must be done in full accordance with Unitas SoT Limited asbestos manager and Principal Designer. The contractor is to note that the property under went major refurbishment and renewal works in 2009 and which time the majority of internal finishes were removed and replaced with modern equivalents.				
2.1.3	Any material which the sample confirms is asbestos and if the material is to be stripped, removed or disturbed in any way then arrangements must be made to comply with The Control of Asbestos Regulations 2012, approved Codes of Practice and any other relevant legislation.				
2.2	Weatherproofing				
2.2.1	Where specific works are undertaken to walls, windows, doors and roof, the contractor shall allow for providing all necessary weather proof sheeting protecting areas where specified works are to be undertaken. All damage caused by water penetration will be totally rectified at the expense of the contractor and to the entire satisfaction of the Contract Administrator.				

SECTION 3 SCHEDULE OF WORKS

Schedule of Works

DOCUMENT USE: Contractor is responsible for applying and verifying all arithmetical formulas to this excel document to safeguard the validity of their own tender.

2.3	Site Set Up				
2.3.1	Bring to site at commencement, maintain and remove from site on completion of works, all plant including skips, material containers, compound and site fencing, warning signs required in order to carry out the work as described herein, in accordance with current Codes of Practice. <ul style="list-style-type: none"> • Skips must not contain any dangerous contents. • Skip location must be carefully planned and agreed in advance with the CA. The skip MUST be sited within the site boundary. • Skips must not be left full / must be emptied each working day. 				
2.4	Welfare facilities				
2.4.1	To be provided by the Contractor including toilet facilities.				
2.5	Builders Clean and Sparkle Clean				
2.5.1	Upon completion, the Contractor must allow for a 'sparkle' clean of all affected areas (both working areas and transit routes) to ensure the property is handed back in a condition suitable for occupation.				
2.6	Testing certificates				
2.6.1	The contractor is to provide any and all testing and commissioning certificates to the Contract Administrator prior to the date of practical completion.				
2.7	Temporary Works				
2.7.1	Contractor to provide all temporary propping and support as necessary and carefully to undertake contracted works. Include for tubes, boards, clips, ladders, adjustable props, steps, trestles, netting and low level foam protection to highway areas as required.				

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2.7.2	Contractor to obtain all necessary licenses / permits from Stoke on Trent City Council and pay all appropriate fees for all temporarily site; scaffolding, hoarding, fencing, portable cabin or hut, storage container or deposited building materials sited on the highway.				
2.7.3	Contractor to ensure all County Council terms and conditions relating to scaffolding or other structure which obstructs the highway (section 169 Highways Act: 1980) are complied with.				
2.7.4	Any conditions attached to the licence by the City Council to be adhered too. Copies of all licences to be retained on site.				
2.8	Scaffolding				
2.8.1	The contractor shall allow to supply, erect, maintain and dismantle on completion of works, independent tied scaffolding to allow all works to be carried out. Works shall include roof renewals and repairs, repointing of chimney stacks, renewal of soffit boards, fascia boards and guttering, external repointing and EWI installation. Any alterations required to the lifts are to be included in the price. The contractor shall provide barriers and protection over all entrances, and pathways to protect the public and members of staff at all times.				
2.8.2	Erect and dismantle scaffold to all elevations, include brick guards, bin chute & ginny wheel. Scaffold shall include for all necessary collective protection.				
2.8.3	Allow for adaptations to drop lifts between re-roofing and fascia, soffit and gutter renewal, brickwork repairs, EWI installation necessary to complete the works.				

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Item	Description of Work	Quantity	Unit	Rate	Costs
3	<u>DEMOLITION & STRIP OUT</u>				
3.1	<u>General</u>				
3.1.1	Contractor to allow for all reasonable precautions to protect the existing services; and allow for demolishing walls and other structures as indicated within the drawings in accordance with BS 6189 and in strict accordance with Materials and Workmanship; Section C20. Make good any damage arising from deconstruction/ demolition.				
3.2	<u>Roof Replacement</u>				
3.2.1	Contractor to allow for complete strip and denail of existing roof coverings, leadwork, valley boards, verge protection and similar sundry items. Include for carting away from site.				
3.2.2	Following removal of all roof coverings, contractor to include for temporary weather protection to prevent further deterioration of existing roof structures. <u>Contractor to confirm proposals at tender stage.</u>				
3.3	<u>Fascia's</u>				
3.3.1	Remove and dispose of existing fascia boards.				
3.4	<u>Soffits</u>				
3.4.1	Remove and dispose of existing cement soffit boards.				
3.5	<u>Eaves Gutters</u>				
3.5.1	Remove and dispose of existing eaves gutters.				
3.6	<u>Rain Water Goods</u>				
3.6.1	Remove existing rainwater pipes.				
3.6.2	Allow for providing alternative means of shedding water away from the building following removal of rainwater goods. Note alternative means to remain in place until replacement goods have been installed.				

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3.7	Roof Insulation				
3.7.1	Existing insulation is of relatively recent installation, contractor to leave in-situ and "top up" as directed by the CA. For the purposes of estimating allow for the removal and replacement of 25% of all existing roof void insulation				
3.7.2	Where existing roof void insulation is damaged due to in adequate weather protection any replacement will be at the contractors expense.				
3.8	Windows and Doors				
3.8.1	Contractor to allow for removing and disposing of all security boarding to both the windows and external doors				
3.8.2	Contractor is to allow to remove ground floor external windows W4 & W13 as indicated on drawing 01-002 and dispose of waste away from site.	2	nr		
3.8.3	Remove all broken and damaged glazing from ground floor windows and first floor windows 10no units in total. Remove all beading in readiness to receive replacement glazing (detailed elsewhere).	10	nr		
3.8.4	Contractor is to allow to remove ground floor external door D1, D7 and D8 as indicated on drawing 01-002 and dispose of waste away from site.	3	nr		
3.9	External Wall				
3.9.1	Remove the existing front entrance canopy prior to fitting a GRP replacement;				
*	Support the underside of the concrete canopy to avoid any collapse, covering any window and door openings as necessary.				
*	Mechanically saw-cut the existing concrete canopy flush to the face of the brickwork.				
*	Exposed steel reinforcement shall be cleaned and treated with two coats of red oxide primer.				

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<p>* Where required the Contractor shall make good the lintel with appropriate bonding agent to the exposed concrete face and a rapid set mortar, trowelled to a smooth finish.</p> <p>* Make good any mortar joints where lead flashings removed.</p>					
<p>3.9.2</p>	<p>Remove existing pvc soil stacks and all associated waste pipework including the removal of fixing brackets and making good background. Lift / breakout surrounding hardstanding, excavate 600mm at the base of the stack to expose the underground drainage connection</p>				
<p>3.9.3</p>	<p>Remove full height (2-storey) boxing and signage around front elevation rain water goods.</p>				
<p>3.9.4</p>	<p>Remove street signage affixed to right hand side front elevation.</p>				
<p>3.9.5</p>	<p>Remove all redundant security lights, alarm coverings, extract fan covers and general signage. Include for removal of all associated fixings and any redundant pipe work / conduit.</p>				
<p>3.10 Internal Walls</p>					
<p>3.10.1</p>	<p>Contractor is to carefully remove partitions to the extents shown on drawing no. 01-002 and dispose of waste away from site. Inspect the walls prior to the commencement of demolition to ensure that there are no services or utility lines running through or on the walls to be deconstructed, where they are present allow to suitably divert or remove if redundant.</p>				
<p>3.10.2</p>	<p>Note where existing walls and partitions are to be retained the existing timber skirting and plaster finishes are to be retained.</p>				
<p>3.10.3</p>	<p>All wallpaper and glazed wall tiling to walls shall be removed to receive new decoration. Where defective plaster is found the contractor must draw this to the attention of the CA. Plaster/ plaster board replacement priced elsewhere.</p>				

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3.11	Central Chimney Alteration works				
3.11.1	Contractor is to allow for removing/ reducing the chimney breast to the ground floor to the extents shown on drawing no. 01-002 and 003. Allow for all temporary support as necessary.				
3.11.2	Contractor is to allow for removing section of the wall to the central chimney breast wall at first floor level to form new entrance doorway to the extents shown on drawing no. 01-002 and 003 to form a new doorway into proposed bedroom 1 (door ref D28). Allow for all temporary support as necessary and dress any damage to surrounds.				
3.11.3	Contractor to allow for removal of 2x sections of ground floor suspended timber floor and break out sub floor / sub structure to underside of existing external wall strip foundation formation level ready to construct new supporting pier and pad foundation 2x1.2x0.8m				
3.12	Ceilings				
3.12.1	All polystyrene ceiling tiles and defective plaster or plasterboards to ceilings shall be removed to receive new.				
3.12.2	For the purposes of estimation allow for removal of 3no separate 1m2 sections	3	m2		
3.13	Floors				
3.13.1	All existing floor coverings are to be removed in their entirety, including the removal of any existing threshold strips. Also allow to remove any adhesive residue, heavily scraping back floors to a sound surface. The contractor is expected to review the proposed floor covering manufacturers recommendations and leave floor suitably prepared. Breakout section of suspended timber flooring in proposed ground floor ensuite No 9 The Square ready to receive new recessed shower tray and waste pipework.				

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3.14	Doors				
3.14.1	Remove all existing internal doors as indicated on drawing no. 01-002 and dispose of waste away from site. The contractor is to include the removal of all associated joinery, such as framing, architraves and the like. Contractor is to allow for temporary security and weatherproofing to removed external doors prior to installing replacements.				
3.15	Sanitary				
3.15.1	Remove all sanitary fittings as per drawing no. 01-002 and either terminate or prepare for new installation and dispose of waste away from site.				
3.16	Fixtures, fittings and equipment				
3.16.1	Carefully remove all existing kitchen installations and dispose of waste away from site.				
3.16.2	Any wall-mounted fixtures and fittings (excluding the aforementioned kitchen units) that are present are to be considered as redundant. Contractor to allow to remove and dispose of off-site, including allowing to make-good any damage to walls caused by fixings.				
3.16.3	Contractor to remove the existing internal window security bars, including removal of any fixings and associated making good.				
3.17	External areas				
3.17.1	The contractor is to allow to remove what remains of the existing concrete post fence to the front elevation and dispose of waste away from site.				
3.17.2	Remove existing ramp and balustrading to the existing front entrance of the property.				
3.17.3	Remove existing concrete slab perimeter paving (and about former ramp position) to the front and side elevations in readiness for new access into the properties.				

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3.17.4	The contractor is to allow to remove existing planting and overgrown vegetation from planted areas to both the rear and front elevations in preparation to receive new hard and soft landscaping as per drawing no. 01-014.				
3.17.5	The contractor is to allow for removal of all thermoplastic carpark demarcation to the retained existing tarmac finishes.				
3.17.6	The contractor is to allow for excavation of existing carpark tarmac surfaces and sub base beneath to the locations detailed as receiving new soft and hard landscaping (laid to lawn and PCC patio and paths) identified on drawing reference 01-014. All excavation arisings to be tested by the contractor and disposed off site accordingly. For the purposes of estimating allow for minimum 300mm deep excavation to soft landscaped areas and 200mm elsewhere.				
3.17.7	Prior to any excavation / grubbing up the contractor is to undertake service scan in the areas proposed to identify any buried services, particular care to be given for water, gas, electric, drainage excavation and general carpark breaking up.				
3.17.8	The contractor is to allow for taking down complete the existing sides and front elevation perimeter masonry wall down to foundation level ready to receive new. Note existing footings to be utilised for new boundary wall (specified elsewhere).				
3.18	Mechanical & Electrical Strip Out				
3.18.1	Contractor is to allow to fully strip-out all existing mechanical and electrical installations and either suitably terminate, or prepare for alteration as part of the works. Contractor will be expected to review the demolition plan (drawing no. 01-002) and ensure that all mechanical and electrical strip out and alteration works that are required to accommodate the proposed works are included. This includes, but is not limited to, the removal of any redundant gas pipes & fittings, redundant water & waste supplies and redundant electrical services.				
3.18.2	Contractor to allow for isolating services where walls are to be demolished and existing Sanitaryware and electric fittings are to be removed, and or replaced.				

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4	<u>EXTERNAL WORKS</u>				
4.1	<u>Roof Repairs</u>				
4.1.1	Following removal of roof coverings, the contractor is to allow for a joint inspection by CA and Structural Engineer to assess condition and stability of existing roof structure (purlins and rafters etc) to enable accurate number of replacement timbers / bearing strengthen details to be identified. Structural Engineer engaged by the client will report upon spans and newly imposed loadings and provide design connection details as required for splice repaired timbers, flitch plates and the like.				
4.1.2	Where found to be decayed allow for splicing new preservative treated timber section of similar size (for pricing purposes use 50 x 150mm timbers, minimum 600mm length beyond cut line).				
4.1.3	Contractor to provisionally allow for the removal and splice repair replacement of 24 linear meters to existing timber rafters etc. To be assessed with SE / CA, no additional expenditure / works to be undertaken without prior CA approval.	24	lm		
4.1.4	Prior to installation of new roof coverings, clean down all timbers and apply Crown Trade (or similar approved) fungicidal solution or similar over. Include for guarantee period of 10 years from completion of installation, administered by an independent insurance protection company.				
4.2	<u>Roof Replacement</u>				
4.2.1	Supply and fix new tiled roof covering complete. Include for all breathable felt, roofing battens, fixings required. Supply and fix smooth faced, interlocking, concrete roofing tiles (colour grey) in accordance with the manufacturers instructions and BS EN 490:2011, terminating into the eaves gutters. Sample to provided for approval prior to order.				
4.2.2	Supply and fix proprietary GRP eaves protectors along the full length of each eaves line.				

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<p>4.3</p> <p>4.3.1</p> <p>*</p> <p>*</p> <p>4.4</p> <p>4.4.1</p> <p>4.5</p> <p>4.5.1</p> <p>4.5.2</p> <p>4.6</p> <p>4.6.1</p> <p>4.6.2</p>	<p>Form Dry Ridge</p> <p>Supply and fix proprietary roll out dry ridge system.</p> <p>Lay dry ridge roll (colour black or grey to match the roof tiling) centrally along the ridge and fix to the ridge batten, at centres specified in the manufacturers instructions.</p> <p>Fix each ridge tile to ridge batten using ridge unions and clamps, mechanically fixed with 75mm x 4.8mm stainless steel screws unless otherwise stated in the manufacturers instructions.</p> <p>Form Dry Valleys</p> <p>Supply and fix minimum 360mm wide proprietary GRP dry fix Valley Gutters (colour black or grey) over minimum 6mm thick plywood overlaid boards and underlay butt jointed over supporting rafters. New valley support boards to terminate to eaves gutter with 50mm overhang allow for lead or manufacturers proprietary flashing saddle as required where dry valleys terminate above eaves level.</p> <p>Form Dry Verge</p> <p>Tiling at verges should project to suit a proprietary, continuous linear dry verge system.</p> <p>Supply and fit linear dry verge system include for all fixings, cover strips, joint unions and ridge cap.</p> <p>Lead Work</p> <p>Soakers shall be at least Code 3 and flashings, gutters, saddles, etc. should be a minimum Code 4.</p> <p>All roof penetrations, shall be treated by a lead slate flashing providing a weathertight joint. Include for consumables Leadmate, clips/ wedges</p>				
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<p>4.6.3</p> <p>4.6.4</p> <p>4.6.4.1</p> <p>4.6.5</p> <p>4.6.5.1</p> <p>4.6.6</p> <p>4.6.6.1</p> <p>4.6.7</p> <p>4.6.7.1</p>	<p>Supply and fit lead flashings as follows to the building;</p> <ul style="list-style-type: none"> * Soakers & Step Flashings to chimney stack (string course) * Lead chimney saddles at ridge * Front Aprons to stack * Rear Aprons to stack * Collars to any penetrations <p>All joints carrying leadwork should be pointed / sealed using a low modulus, non-corrosive, neutral cure silicone sealant.</p> <p>Lead Stepped Flashings</p> <p>Contractor to allow for supply and forming lead work for step flashings as required. Minimum up-stand to be 75mm and extension under tiles 100mm. Allow for Code 3 lead work to BSEN 12588. Chase out brickwork to the minimum depth of 25mm and to turn flashing into mortar joints. Brush out debris and wedge with lead pieces tightly into chases and repoint. Stepped flashings lengths not to exceed 1200mm.</p> <p>Lead Abutment Flashings</p> <p>Apron flashings at abutments to be in code 4 in lengths not exceeding 1500mm with end to end lap joints of not less than 100mm. Upstand to the abutment to be not less than 75mm and lapped over the pitched roof covering.</p> <p>Lead Soakers</p> <p>Soakers shall be formed from code 4 Lead sheet with a minimum upstand at the abutment of 75mm and a lap of not less than 100mm over the tiles. The length of the soaker to be equal to the gauge plus lap plus 25mm.</p> <p>General Lead Works</p> <p>Free edge of lead to be adequately clipped, minimum 300mm and maximum 500mm and at all lap positions. Fixings to be either copper, stainless steel or lead clips (lead clips only in sheltered locations) as per original building materials. Copper should conform to BS EN 1172 being not less than 50mm wide and 0.60mm in thickness. Stainless steel to be 50mm wide and minimum 0.375mm in thickness and conforming to BS EN 10088.</p>			
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4.6.7.2	Nails to be either copper or stainless steel clout nails conforming to BS1202-1 and -2. Shanks to be, angular, helical or serrated and be no less than 20mm in length. Heavy duty fixings to be no less than 3.35mm in diameter and light duty 2.65mm in diameter. Nail heads to be 3x shank diameter. Stainless steel nails to be austenitic stainless steel, excluding free machining grades.				
4.6.7.3	Screws to be brass or stainless steel conforming to BS 1210 and not less than 20mm long.				
4.6.7.4	To reduce patination staining all new lead work to be treated with water based patination oil upon completion of each day.				
4.6.7.5	All works to be undertaken in accordance with Lead Association guidelines and principals.				
4.7	Fascia's				
4.7.1	Supply and fit 250mm (cut to size) uPVC square edged fascia board (not coverboard) Minimum thickness 16mm nailed at a maximum 600mm centres with 65mm A4 marine grade stainless steel polytop shank nails. Allow for cover strips, capping's and packers etc. Provide 8mm expansion gap at joints.				
4.8	Soffits				
4.8.1	Supply and fit hollow extruded pvc soffit boards 100mm T&G profiles fixed at maximum 600mm centres on treated softwood bearers at the foot of every rafter and to be securely supported at each end. Butt joints, using pvc joint covers / trims over timber bearers.				
4.9	Eaves Gutters				
4.9.1	Supply and fix 112mm PVCu half round guttering (colour white) with new brackets including all fittings, outlets, stop ends & joints etc.				

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4.9.2	Remove existing rainwater pipes, supply and fit new 68mm dia. rainwater pipes to new outlets clipped at no more 1800 centres including all fittings & joints etc. * Include for all necessary stop ends, fascia brackets, pipe clips, offset bends, shoes and swan necks and the like. * New rainwater system to have a 10 year performance and colour guarantee.				
4.10	Masonry Repointing (Generally)				
4.10.1	Allow for carefully raking out existing areas of brickwork pointing where failed or missing. Mortar to be raked out to a depth of 20mm causing no damage to brick, and all debris to be brushed from joints. For the purposes of estimating allow for the following:- * Brickwork beneath DPC - Complete * Ground Floor - 10m2 * Beneath Rainwater goods - 15m2 * First Floor - 10m2				
			m2		
		10	m2		
		15	m2		
		10	m2		
4.10.2	Mechanically repoint defective joints via peristaltic pump and gun. Mortar to match as near to existing brickwork and in accordance with BS 5628: Part 1 for mortar designation. Works required as preparatory works for new external wall insulation specified elsewhere.	35	m2		
4.10.3	No works to proceed until or locations are marked and agreed between the CA and contractor representative				
4.10.4	No masonry work to be built when air temperature is at or below 3°C and falling, or unless it is at least 1°C and rising.				
4.10.5	All new mortar to be in accordance with Table 13 of BS 5628: Part 3. General use mortar designation class (iii) for internal and external walls above d.p.c. (all proportions by volume) 1 : 6 cement : sand. All pointing work to be undertaken with pre mixed coloured "Ready-to-use" mortar, manufactured from precisely weight batched materials, under carefully monitored conditions to ensure optimum quality to comply with relevant British and European Standards. All new mortar to match existing materials.				

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4.11	Brickwork Chimney Repairs				
4.11.1	Allow for carefully raking out existing areas of brickwork pointing complete. Mortar to be raked out to a depth of 20mm causing no damage to brick, and all debris to be brushed from joints.				
4.11.2	All brick work shall be neatly pointed, in 3:1 sand cement mortar jointed with a bucket handle finish. Finished brickwork and roof surface must be clean and stain free on completion.				
4.11.3	Supply and fit slate bed or 12mm cement board to receive new chimney pots				
4.11.4	Supply and fit purpose made, four-way weathered, precast chimney coping with integral throating (to BS5642) on a 3:1 sand cement bed. The coping shall provide an overhang of a minimum of 55mm projecting over every elevation of the chimney stack ensuring moisture is carried to the roof surface.				
4.11.5	Where a chimney stack exceeds dimensions suited to a preformed coping the contractor shall allow for a sectional coping, neatly pointed, the bedding joint must include a dpc.				
4.11.6	Supply and fit Chimney pots to match existing				
4.11.7	Point around chimney pots in 3:1 sand cement mortar.				
4.11.8	Supply and fit stainless steel bird guard with integral rain cap to prevent weather and pest ingress to each chimney pot				
4.12	Masonry Replacements (Generally)				
4.12.1	Carefully chop out and replace all damaged bricks on the external elevations. Allow for using hammer and bolster. No cut marks, etc. to be accepted. Ensure new bricks match existing in size, colour and general appearance. Mortar to match as closely as possible to existing wall. New bonding style to match existing. Bricks to be laid on a full bed of mortar and be plumb and true.				
4.12.2	For the purposes of estimating allow for replacing 50no isolated bricks across the entirety of both properties.	50	no		

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4.12.3	No works to proceed until or locations are marked and agreed between the CA and contractor representative				
4.13	Masonry Structural Repairs				
4.13.1	Stitch repairs to cracking. Rake out mortar to fully expose crack. Install 20mm wide x 3.0mm thick stainless steel flat ties at max 225mm centres across path of crack - where possible to extend min 150mm either side. Alternatively install stainless steel tie rods e.g. Helibar in grooved slots within the wall thickness at 225mm centres and repoint on completion with a designation mortar mix.				
4.13.2	For purposes of estimating allow for 3x separate repairs to isolated locations, each repair to be 2lm * Repair 1 * Repair 2 * Repair 3	2 lm 2 lm 2 lm			
4.13.3	No works to proceed until or locations are marked and agreed between the CA and contractor representative				
4.14	General Works to External Walls				
4.14.1	Following the removal for windows ref W4 & W13 allow to remove surrounding brickwork and widen openings and dress brickwork to form new external doors to suit door size 910mm x 2085mm ref D19 in location W4 and 1190 x 2090mm ref D23 in location W13, providing temporary weatherproofing and security until such a time that the new external doors are fitted (detailed elsewhere). Include for providing new lintels over widened openings via standard size cavity steel lintels with integral insulation and cavity tray, installed to manufacturers recommendations. Allow for all rebuilding and dressing of brickwork as necessary to match existing.				
4.14.2	Following removal of door ref D1 and D8 allow to tooth bond in and build up existing opening in new cavity brickwork / blockwork. Ensure new bricks match existing in size, colour and general appearance. Mortar to match as closely as possible to existing wall. Bricks to be laid on a full bed of mortar and be plumb and true.				

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<p>4.15</p>	<p>External Electric meter box</p>			
<p>4.15.1</p>	<p>Allow for the supply and installation of 2no new recessed meter box 'Mitras' or similar approved. Contractor is to include for breaking out the external leaf brickwork and include for installing a new 1nr concrete Naylor Fair face lintel S5 (or similar approved) to carry outer brick leaf - unfactored load per metre 10kN.</p>			
<p>4.16</p>	<p>External Wall Insulation System</p>			
<p>4.16.1</p>	<p>To front, sides and rear elevations allow for the installation of proprietary external wall insulating system to achieve target U value of 0.30W/m2k. Typically to be achieved using either 90-105mm EPS board or 110mm mineral wool, with silicone render finish (typical system depth 120 - 140mm). The system proposed by the tendering contractor is to be suitable for social housing applications and achieve impact resistance category A as defined by BS 8200:1985.</p>			
<p>4.16.2</p>	<p>Proposed system to be BBA accredited and installed by trained and accredited operatives only, and to achieve minimum 10 year materials and workmanship warranty / guarantee.</p>			
<p>4.16.3</p>	<p>Contractor to provide system manufactures BBA accredited thermal performance calculations, condensation risk analysis, acoustic performance analysis and SAP Assessment.</p>			
<p>4.16.4</p>	<p>Prior to undertaking any insulation works the contractor is to allow for preparing a 1m² sample board of both the acrylic brick slips and silicone render for approval by CA and Local Authority Planning Department. Sample panel to remain on site at all times to act as overall quality indicator. No works to proceed until relevant approvals have been issued by CA / LA Planning, contractor to ensure adequate notice to schedule inspections.</p>			

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4.16.5	External wall insulation system to be finished in silicone render in an off white colour to be determined by the employer. When rendered the overall thickness of the cladding system is to be a maximum 140mm with board / insulation slab sizes typically 1200 x 2400 The contractor is to include for acrylic brick slip decorative courses as per drawings no. 01-010 and 01-011. It is the responsibility of the approved Installer to survey the building prior to pricing to allow for all necessary beads, trims and flashing. Do not rely solely on the project drawings for every detail being indicated. The installer should survey and make a list of enabling works required prior to commencement and price and notify the main Contractor accordingly at tender stage. Typically sundry items include but are not limited to, preparation of the existing substrate to receive new system, window over sills, verge trims and flue/waste pipework penetrations.				
4.16.6	Contractor to note the requirement to build out either side of the 2nd front entrance doors and new canopies (specified later) with EPS / Mineral wool slab by minimum 100mm to form new entrance piers. New piers to be finished with acrylic brick slips as per drawing no 01-010 and 01-011.				
4.16.7	Following strip out works and necessary repairs the contractor is to allow for applying a fungicidal wash over all existing features and clean down ready to receive new coatings.				
4.16.8	Following completion of brickwork repairs EWI system manufacturer to review existing substrate and advise on any system requirements (mesh / movement joints) to prevent cracking occurring in the installed system.				
4.16.9	The system is to be designed to provide an insulated wrap around the existing building. Once installed the panels are joined and adhered to the existing substrate together with mechanically fixings to form a continuous monolithic insulated wall.				

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4.16.10	Contractor to undertake survey of existing walls to identify areas of un-evenness. For tender purposes allow for dubbing out all existing walls with suitable levelling coat in accordance with system manufacturer requirements, assume walls are uneven and include for levelling as per External Wall insulation system manufactures recommendations, note no additional costs for levelling existing substrate will be accepted.				
4.16.11	Insulation to be fixed in accordance with manufacturers requirements, contractor to include for suitable adhesive in conjunction with mechanical fixing methods. Allow for pull out tests prior to application and present to CA for approval.				
4.16.12	As detailed previously include for all necessary trims, beads and sundry items including base track to suit insulation system, stop beads, movement beads, corner beads, mesh, and window reveal beads.				
4.16.13	Include for CPR primer. Apply neat using roller or brush application to achieve even coverage.				
4.16.14	External wall insulation to incorporate silicone through colour render typically consisting of Basecoat of 24-26mm thick applied in two coats of 14-16mm scratched followed by 8-10mm floated with silicone top coat finish or acrylic brick slips.				
4.16.15	Existing roof verges do not over sail masonry by more than 50mm, as such it will be necessary to allow for providing system proprietary trim to top of insulation and beneath verge / eaves. Verge trim to have minimum 40mm overhang and is to be sealed with low modulus mastic sealant (white).				
4.16.16	Where new canopy (specified later) abuts external insulation include for system providers proprietary stainless steel base track profile fixed to substrate with insulation and new lead flashing installed behind.				
4.16.17	All new rainwater / waste pipes / SVP's to be installed on the face of the insulating system via appropriate stand off screws to prevent damage to the insulation, as per system details.				

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4.16.18	Contractor to allow for installation of all new extractor vent covers fixed through the EWI system via appropriate stand off screws or the like.				
4.16.19	Contractor to include for all necessary protection of retained items windows, doors and the like from cement, acrylic and silicone based render products. Upon completion of the work all protection to be removed and items cleaned down.				
4.16.20	As a general note all finishing work is to be undertaken to maintain consistency of finish, colour and texture. Whole elevations / sections are to be completed in one pass and applied continuously without a break. Where this is not possible a render stop bead should be introduced.				
4.16.21	Contractor to include for temperature monitoring and recording all data regards application temperatures and weather conditions to confirm / support that works have been applied correctly.				
4.17	EWI System Over Sill				
4.17.1	Contractor to provide Aluminium Polyester Powder coated bespoke cill over all existing installations (sized to suit existing opening) to include welded corners, upstands, end caps as required. Cill to be formed as follows:				
	* All profiles to be extruded from aluminium alloy 6060 T6, T5 or T4 to BS EN 12020-2 / BS 755-9 and with polyamide thermal break sections manufactured from glass reinforced nylon sections capable of withstanding temperatures in excess of 200 °C.				
	* The finish to all aluminium profiles shall generally be Polyester Powder Coated to BS EN 12206 in a standard RAL colour 9016 to satisfy a corrosion classification as defined by the powder manufacturer.				
	* It shall be applied to an average thickness of 60 microns.				

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	<p>* All powder coating shall be supported by a manufacturers/applicators guarantee for a standard grade finish subject to the applicators approval.</p> <p>* Where new powder coated metal overcills have been provided seal with low modulus silicone seal</p> <p>4.18 Canopy</p> <p>4.18.1 Install new 1200mm projection one piece flat roof GRP or similar non structural 25mm fall flat roof lead effect canopy. As per drawing no 01-010 and 01-011. Canopy to have encapsulated anchor brackets pre drilled upstands and WBP plywood base, sides. Include for all necessary drilling, plugging and fixing back to existing structure as per manufactures details.</p> <p>4.18.2 Fix canopy through the back plate and the roof upstand flange into the wall with 6mm hammer fixings and/or 8mm raw bolts at 400mm centres, use caps and washers where appropriate to finish.</p> <p>* Trim the fixing flange to fit around obstacles if required.</p> <p>* Mastic seal all edges with a low modular sealant.</p>				
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5	<u>INTERNAL WORKS</u>				
5.1	General note				
5.1.1	Contractor is to note that structural steel work design, calculations and builders work form part of the contractors design portion and responsibility. The contractor is to allow for all structural alterations in strict accordance with their structural engineer's details.				
5.2	Central Chimney Alteration works - Part of Contractors Design Portion				
5.2.1	Following the removal of the chimney breast and supporting wall to the extents shown on drawing no. 01-002 (detailed elsewhere). The contractor is to allow for designing new steel work supporting structure and associated foundations. For the purposes of estimating the contractor is to note the Structural Engineers initial design note - allow for installing 3x new structural support beams (3no - 254 x 146 x 31 kg/m Universal Beams Grade S275 on concrete pad stones - subject to detailed design), that will support the central wall/ and chimney breast to the first floor above. Contractor is to allow for making good the first floor timber floor joist providing extension/ additional joist hangers as necessary to the satisfaction of the CA's structural engineer.				
5.2.2	The width of the chimney breast will dictate the need for 3x separate steels to support the structure above. The existing wall pier will not provide sufficient width to allow 150mm end bearing of all 3 members. Following removal of the suspended floor the contractor is to allow for new 1.2x0.8x0.25m pad foundations in 2no locations in C10 / Gen 1 concrete dowelled into existing foundation and made ready to receive new brickwork pier. Build new 900mm Engineering brickwork pier tied into existing inner leaf to support steelwork above. All subject to detailed design The contractor shall allow a provisional sum of £1,000 for any additional foundation requirements to facilitate steel work supports.				

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5.3	Standard Partitions				
5.3.1	In preparation for new studwork the contractor is to allow for exposing suspended floor beneath new stud partitions (ground and first floor) in order to install additional noggins as required so as the new stud partition base can be affixed to. Repair / replacement of floor boarding deemed to be included.				
5.3.2	Include for providing all Standard partitions as indicated by drawing Nr. 01-004 to comprise overall thickness of 88mm formed from 63x38mm timber stud work at 600mm vertical centres fixed via wood screws, with 25mm Isover acoustic partition roll (APR) 1200 insulation. Overplated with 12.5mm Gyproc SoundBloc plasterboard to both faces of partition to achieve 30mins fire resistance and 40Rw dB. Allow for framing / patress plates to all radiator positions. System reference A026009.				
5.4	New Party wall Blockwork (Increased acoustic)				
5.4.1	Contractor to note that the rear right hand side of the dwelling incorporates a part solid floor				
5.4.2	As per drawing ref 01-004 the existing dwelling is to be split into 2no separate dwellings with the installation of new party wall.				
5.4.3	Contractor to allow for the installation of a new 2 storey single skin 100mm medium density blockwork wall to create the party wall. Allow for breaking out the screed at the base of the wall down to 'bare slab' and include for DPC layer on which to build the new blockwork. Include for a Gypliner Universal lining system to one side of the wall with a minimum 85mm cavity (framing at 600mm c/c) with 50mm Isover Acoustic Partition roll into the cavity (or similar approved) - Lined with a double layer of 12.5mm Gyproc soundbloc plasterboard (or similar approved) and 12.5mm Gyproc soundbloc dabbed directly to blockwork.				
5.4.4	Include for the removal section of the first floor as necessary to facilitate wall installation				
5.4.5	The contractor shall allow a provisional sum of £1,500 for any foundation requirements to facilitate blockwork partitions.	1	item		£1,500

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<p>5.5</p>	<p>Infill Wall</p>				
<p>5.5.1</p>	<p>Include for providing 2x Standard partition stud walls as indicated by drawing Nr. 01-004 to infill existing opening between Bedroom 1 and 2 to comprise overall thickness of approx. 300mm formed from 2x 63x38mm timber stud work at 600mm vertical centres fixed via wood screws, with 25mm Isover acoustic partition roll (APR) 1200 insulation. Overplated with 12.5mm Gyproc SoundBloc plasterboard to exposed faces of partition to achieve 30mins fire resistance and 40Rw dB. System reference A026009.</p>				
<p>5.6</p>	<p>New Plaster works (Walls)</p>				
<p>5.6.1</p>	<p>All new partitions to incorporate plaster skim to all areas. Prior to application of plaster skim coat, apply British Gypsum Thistle plaster bonding agent. Contractor to allow for installation of Gyproc or similar jointing tape and make ready to receive new 5mm plaster skim finish - to provide a smooth uninterrupted internal finish ready to receive new decoration (specified elsewhere). Apply Gypsum plaster finishing coat applied with firm pressure, built out to the required thickness and trowelled to a smooth finish. Good site practice should be followed as outlined in BS 8481 and BS EN 13914-2.</p>				
<p>5.7</p>	<p>Plaster Repair works (Walls)</p>				
<p>5.6.2</p>	<p>Contractor to allow for plaster patch repairs and skim finish to areas of damaged existing plaster, caused by removal of existing walls, services, accessories and any holes caused by such removals.</p>				
<p>5.6.3</p>	<p>Any loose existing plaster must be removed, leaving only sound, fully adhered plaster. Prior to application of plaster skim coat, apply British Gypsum Thistle plaster bonding agent. Contractor to allow for isolated patch repairs and skim finishes ready to receive new decoration.</p>				
<p>5.6.4</p>	<p>For the purposes of estimating allow for the following repairs</p> <ul style="list-style-type: none"> * All damage to ground floor steel work * 10no repairs of less than 0.5m² each * 10no repairs of less than 1m² each 	<p>1 10 10</p>	<p>item nr nr</p>		

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5.7	New Plaster Works (Ceilings)				
5.7.1	Contractor to allow for replacing section of ceiling plaster boards about new staircase installation, include for standard Plasterboard from British Gypsum 12.5mm (or similar approved) installed to manufactures details and requirements in accordance with BS 8481:2006.				
5.8	Plaster Repair works (Ceilings)				
5.8.1	For the purposes of estimation allow for plaster repairs to 3no separate 1m2 sections	3	nr		
5.9	Roof Void Fire Separation				
5.9.1	Contractor to ensure continuity of the fire separation to party walls.				
5.9.2	Voids over fire walls to be filled with layers of mineral quilt; mineral fibre quilt pads to seal gaps between battens; seal air paths in the plane of the separating wall with 50mm wire reinforced mineral fibre nailed to rafter.				

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6	<u>JOINERY</u>				
6.1	External Windows				
6.1.1	Contractor is to allow for installing replacement double glazing into the existing Upvc frames where damaged. It is the contractors responsibility to measure all existing framing and supply the correct measured glazing as required. It is anticipated that existing beading, ironmongery and other miscellaneous fittings will be required. The contractor should allow for all such items to the bring the windows back into full functional use.	10	nr		
6.1.2	The contractor is to allow for replacing existing glazing with new frosted glazing to the windows serving:				
* Ground floor accessible bathroom		1	nr		
* Ground floor W.C.		1	nr		
* First Floor Bathroom (s) x 2		2	nr		
	Note: Contractor to confirm frosted style of glazing with CA prior to order.				
6.1.3	The contractor shall supply and fix upvc coverboards to existing timber window sills to Bathroom, WC, Accessible Bathroom and Kitchens only.	6	nr		
6.2	External Doors				
6.2.1	To new door opening in place of external ground floor window W4 and in place of removed ground floor door D7. Supply and install, in strict accordance with manufacturer's specification, 'Masterdor Ltd' (or similar approved) 920mm x 2085mm reinforced PVC-U linings, frames and architraves together with 44mm Nanya GRP door blade 'Black' to external face and 'white' to internal face of door. Door blades to be featured both sides with satin weather bar. Glazing to be 6.9mm Lam x 4mm Tuff Glazing. 15mm wheelchair aluminium threshold.	2	nr		
* Hardware:	Door to be supplied with: 3x stainless steel Butt Hinges Winkhaus multipoint lock - include for Lever handle with cylinder guard and UAP cylinder (anti bump key).				
* Door furniture:	Door to be supplied with: Letter plate with security cowl; 180 degree door viewer; security chain; 3" door numerals				

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6.2.2	<p>The contractor is to install 1No. Fully glazed uPVC double Doors and frame White 1190 x 2090mm to new door opening in place of external ground floor window W13. To be installed in strict accordance with manufacturer's specification.</p> <ul style="list-style-type: none"> * Factory double glazed units to achieve a whole frame U-value of 1.6 W/m²k with 6.8mm laminated outer pane and 4.0mm "toughened" inner pane * Note: Doors to be "Secured by Design", compliant and all provided with a Part M compliant level threshold * Handles to be Trojan Lever/Lever in Chrome or similar approved with ERA multipoint hook lock or similar approved and high security nickel euro-profile (key/key) cylinder with cylinder guard supplied with three keys. 	1	nr		
6.2.3	Doors to be sized and fitted in existing / new opening fixed back to masonry structure as required.				
6.3	Internal Floors				
6.3.1	Contractor to allow for installing new suitably sized first floor, floor joists to either side and butted against new party wall line ready to receive new floor boards and covering.				
6.3.2	For the purposes of estimating allow for 2x new 63x225mm deep timber joists at 400mm centres (C24 grade timber). Sizes to be determined once exposed.				
6.3.3	Existing floor boarding to underside of window ref W5 to the ground floor is damaged. Allow for replacing floor boards and ply covering to provide suitable finish ready to receive new floor coverings.				
6.3.4	Existing floor boarding between window refs W30-31 to the first floor is damaged. Allow for replacing floor boards and ply covering to provide suitable finish ready to receive new floor coverings.				
6.3.5	Contractor to allow a provisional sum of £500 for general repairs to floor boarding throughout the premises.	1	item		£500

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6.3.6	Note: This is not to include repairs necessary following installation of noggins for new stud partitions, all such repairs deemed to be included as part of the works.				
6.4	Internal Doors				
6.4.1	All internal doors referenced in accordance with drawing No. 01-003				
6.5	<u>Ground floor doors</u>				
6.5.1	Door D22				
6.5.1.1	Contractor to allow of the supply and fix of new 35mm moulded middleweight core door(s) primed and fully finished with one coat of undercoat and top coat of gloss. Include for new door casements to suit both new and existing reveals to all apartments. Unitas SOT Ltd to confirm style - for pricing purposes and allow for a 6 panel moulded style. Allow for 1981 x 926mm. Door is to be hung on sliding ironmongery .	1	nr		
6.5.1.2	Ironmongery: Supply and install Hercules 120 ball bearing sliding door system ref: 31269.2. Including for wall mounting track with pelmet ref: SD/WB45 and wall mounted angle brackets ref: 40278.	1	nr		
*	Included for Touch point flush cabinet pull - 39 x106mm to both sides of the door.	2	nr		
6.5.2	Doors D20 & D21				
6.5.2.1	Contractor to allow of the supply and fix of new 44mm moulded middleweight core door(s) primed and fully finished with one coat of undercoat and top coat of gloss. Include for new door casements to suit both new and existing reveals to all apartments. Unitas SOT Ltd to confirm style - for pricing purposes and allow for a 6 panel moulded style. Allow for fire door FD30, 1981mm x 926mm x 44mm.	2	nr		
6.5.2.2	Ironmongery: Supply and install 3nr butt hinges per door in-order to hang door. Supply and fit 2 nr straight latch lever handles (sprung handle), silver, to include for tubular mortice latch and associated rebate kit. Include for floor mounted door stops (half moon) 1nr for each door.	2	nr		

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6.5.3 Doors D18					
6.5.3.1	Contractor to allow of the supply and fix of new 44mm moulded middleweight core door(s) primed and fully finished with one coat of undercoat and top coat of gloss. Include for new door casements to suit both new and existing reveals to all apartments. Unitas SOT Ltd to confirm style - for pricing purposes and allow for a 6 panel moulded style. Allow for fire door FD30, 1981mm x 926mm x	1	nr		
6.5.3.2	Ironmongery: Supply and install 3nr butt hinges per door in-order to hang door. Supply and fit 2 nr straight latch lever handles (sprung handle), silver, to include for tubular mortice latch and associated rebate kit. Include for floor mounted door stops (half moon) 1nr for each door.	1	nr		
6.5.4 Door D17					
6.5.4.1	Contractor to allow of the supply and fix of new 44mm moulded middleweight core door(s) primed and fully finished with one coat of undercoat and top coat of gloss. Include for new door casements to suit both new and existing reveals to all apartments. Unitas SOT Ltd to confirm style - for pricing purposes and allow for a 6 panel moulded style. 1981mm x 762mm x 44mm .	1	nr		
6.5.4.2	Ironmongery: Supply and install 3nr butt hinges per door in-order to hang door. Supply and fit 2 nr straight latch lever handles (sprung handle), silver, to include for tubular mortice latch and associated rebate kit. Include for floor mounted door stops (half moon) 1nr for each door.	1	nr		
6.5.4.3	D17 only - Ironmongery: Supply and fix 1 nr silver Toilet door lock with vacant engaged indicator bolt.	1	nr		
6.5.5 Fire Doors Generally					
6.5.5.1	To the fire doors (frame, door leaf, intumescent strips, cold smoke seals, ironmongery incl. door closers, must all be in compliance with BS 476 Part 22, have a certificate for manufacture and a certificate for Installation. The contractor must supply evidence that they are signed up to a Certified Scheme for manufacture & installation i.e. FIRAS Installer Certification Scheme or similar approved.				

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6.5.5.2	<p>Manufacture: The fire door manufacturer certifies the manufacture of the door leaf/ set, and is then required to supply installation instructions to the contractor fitting the doors.</p> <p>Installation: Installation to be certified by the contractor fitting the doors. i.e. FIRAS Installer Certification Scheme or similar approved.</p>				
6.5.5.3	Gaps under fire doors: A gap of no more than 10mm for a fire door unless a threshold seal is fitted such as an auto drop down.				
6.6	<u>First floor doors</u>				
6.6.1	Doors D24 - D32				
6.6.1.1	Contractor to allow of the supply and fix of new 35mm moulded middleweight core door(s) primed and fully finished with one coat of undercoat and top coat of gloss. Include for new door casements to suit both new and existing reveals to all apartments. Unitas SOT Ltd to confirm style - for pricing purposes and allow for a 6 panel moulded style. 1981mm x 762mm.	9	nr		
6.6.1.2	Ironmongery: Supply and install 3nr butt hinges per door in-order to hang door. Supply and fit 2 nr straight latch lever handles (sprung handle), silver, to include for tubular mortice latch and associated rebate kit. Include for floor mounted door stops (half moon) 1nr for each door.	9	nr		
6.6.1.3	D26 & D32 doors only - Ironmongery: Supply and fix 1 nr silver Toilet door lock with vacant engaged indicator bolt.	2	nr		
6.7	Architraves				
6.7.1	Supply and install 18mm MDF chamfered architrave to all new doors, pre-primed ready for decoration. Joints are to be mitred.				
6.8	Skirting				
6.8.1	Supply and install 18mm MDF chamfered skirting (to match existing) to all new walls, pre-primed ready for decoration. External joints are to be mitred and internal joints are to be scribed. Contractor is to allow for any associated sundry items.				

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6.9	General Items				
6.9.1	The contractor shall supply and fix upvc coverboards to existing timber window cill within kitchen and bathroom areas.	6	6		
6.9.2	Contractor to allow for the supply and fix of new timber fixing batten to the head of each window reveal. To be mechanically fixed back to the wall - suitable for new occupants to fix new curtains and blinds where preferred.				
6.10	Kitchens				
6.10.1	Reference should be made to other applicable sections of this document.(i.e. plumbing, electrical etc.)				
*	Professional & Industry Standards The following list refers to standards, specifications, recommended procedures, & output quality. This list is by no means exhaustive. Notwithstanding the standards referred to hereunder, the Contractor will ensure full compliance with all relevant standards & codes BS 8000-5:1990 Workmanship on building sites. Code of practice for carpentry, joinery and general fixings. BS 8000-0: 2014 Workmanship on building sites. Code of practice for plastering and rendering. BS 8000-11:2011 Workmanship on building sites. Code of practice for wall and floor tiling. BS 8000-13:1989 Workmanship on building sites. Code of practice for hot and cold water services (domestic scale). BS 7671 Requirements for electrical installations. IEE wiring regulation. 17th edition. BS EN 50110 part 1 & 2 Operation of Electrical appliances BS1362 Specification of general purpose fuse links for domestic appliances. BS1363 part 1 – 5 13A plugs and socket outlets.				

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6.11	<u>Kitchen Installation</u>				
6.11.1	The contractor shall supply and fit the following products in accordance with manufacturers requirements and guidance: <ul style="list-style-type: none"> * Kitchen Base Units: Richmond Moorland Range * Kitchen Wall Units: Richmond Moorland Range * Kitchen Work surfaces: Richmond Moorland Range 				
6.11.2	Soft Close Hinges - supply and fit soft close hinges as follows: 1No to doors up to 500mm wide, 2No. To doors over 500mm wide, and retrofitted to drawer units as per the agreed contract SOR.				
6.11.3	The contractor shall supply and fix all wall and base units in accordance with manufacturers fixing instructions. Units to be selected from the range as stated				
6.11.4	All base filler units, Plinth boards, end and corner caps etc. will be included as part of the installation.				
6.11.5	Worktops are to be 30mm thick from range stated. Where required the contractor shall laminate worktop ends, cut and seal, inset sink tops, silicone seal etc, in accordance with the archetypal plan.				
6.11.6	The contractor shall include all trims, jointing strips etc to satisfactorily complete the work				
6.11.7	Kitchen sinks shall be stainless steel, with two tap holes including mixer-lever taps and 75mm deep seal PVC waste trap.				
6.11.8	Where indicated on the plan the Contractor shall neatly core drill the external wall to receive a Proprietary Tumble dryer vent kit supplied and fitted by the contractor.				
6.12	<u>Stairs</u>				
6.12.1	Contractor to allow for removal of existing ground floor ceiling and first floor level floor boarding in the location of the new stair case ready for its insertion.				

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6.12.2	In order to form new opening for new staircase remove existing floor joists spanning between existing steel beams, install new double trimmer joists set perpendicular to the existing steelwork and bolted together using M10 (Grade 8.8) H.D. Bolts. New timbers to be supported off existing steelwork.				
6.12.3	Between new trimmer joists install double floor joist between, hung off joist hangers, to create edge of new stair opening. Between existing steel beam and new double joist allow for installing new timber noggins at 400mm centres to create support for new floor boards and covering.				
6.12.4	For the purposes of estimating allow for all new timbers to be 63x225mm deep timber joists at 400mm centres (C24 grade timber). Sizes to be determined once exposed.				
6.12.5	Contractor to allow for purpose built softwood domestic private stair with winder box as shown on drawing ref 01-003. All risers to be of the same height being maximum of 220mm with a minimum going of 250mm incorporating 16mm nosing overlap with 42 degree maximum pitch.				
6.12.6	Width of stairs between overall strings to be minimum 860mm. Include for all newel posts, balustrade and handrails finished ready to receive direct decoration, minimum 900mm high.				
6.12.7	<p>Typical specification</p> <ul style="list-style-type: none"> * Width overall string 860mm (overall newel 890mm) * Strings - 32mm EdgeLam Engineered pine * Typical string depth 250mm * Treads 250mm MDF * Risers 12mm MDF * Newel Posts 90x90mm Pine Square (x3) * Spindles - 32mm Pine Square * Handrail - Pine STHR Profile * Base rail - Pine STHR Profile 				

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6.12.8	The new staircase is to be constructed in timber in strict accordance with Materials and Workmanship section of this document ensuring that all components and dimensions are in accordance with Building regulations Part K.				
6.13	Boxing				
6.13.1	The Contractor shall allow a provisional sum of £500.00 for boxing in kitchen pipework generally. Boxing to be 18mm WBP BB/CC exterior grade plywood. Profile to be agreed with CA. Provisional sum will cover off decoration; 1no. Primer coat and 1no. Undercoat, prior to the application of a finishing coat and two coats of Johnstone Trade, or similar good quality gloss paint approved by the Contract Administrator. Colour: Pure Brilliant White.	1	item		£500

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7	<u>MECHANICAL INSTALLATION - Contractors Design Portion</u>				
A	The existing building is to be split into two separate dwellings with separate metered services i.e. Gas, water and Electric.				
B	Contractor is to allow for the detailed mechanical design for all new services as per indicative mechanical drawing. The contractor shall allow for all builder's works and sundry items required in order to facilitate the works. The performance specification requirements are detailed below:				
C	All works are to be undertaken in accordance with all current regulations and GasSafe requirements				
7.1	Water				
7.1.1	It shall be the responsibility of Statutory Authority via direct employment from the Client to extend existing primary water supplies to create separate metered water supplies to both properties. Currently only 1 supply exists to No 11. The new metering location for each dwelling shall be located within each kitchen beneath the proposed floor based cabinets beneath the sink. The contractor is responsible for the instruction, ordering and coordination of said supplies, and metering from the statutory provider, and is to allow for the connection of all new installations to new metered supplies.				
7.2	Gas				
7.2.1	It shall be the responsibility of Gas Statutory Authority via direct employment from the Client to extend existing primary gas supplies to create separate metered gas supplies to both properties. The metering location for No 9 shall be located externally within a meter box located adjacent to the main entrance. It is assumed that the existing gas connection and metering serving the property will be sufficient to serve No 11. The contractor is responsible for the instruction, ordering and coordination of said supplies, and metering from the statutory provider, and is to allow for the connection of all new installations to new metered supplies.				

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7.3	Gas Meter Box				
7.3.1	Allow for a low level external gas meter box Brown National Grid Semi-Buried Gas Meter Box 'Mitras' or similar approved.				
7.4	Hot and Cold Water Supplies				
7.4.1	Contractor shall include for all necessary tools, labour, materials and equipment to put into full working operation the domestic hot and cold water services for BOTH dwellings, inclusive of the following:				
7.4.2	Provide, install, test and commission new incoming mains domestic cold water services, to support the apartments / dwellings domestic hot and cold water requirements. Mechanical Contractor connection points from the utility company's incoming services.				
7.4.3	Provide, install, test and commission pipework from the incoming services to serve each apartments / dwellings.				
7.4.4	Hot water shall be provided by Valiant Eco Tech plus combination boilers within each dwelling (detailed elsewhere).				
7.4.5	Provide, install, test and commission all internal pipework, fittings, valves and materials necessary to provide hot and cold water services to each outlet point, including trace heating to any external sections of pipework (if any).				
7.4.6	Install, test and commission all sanitaryware.				
7.4.7	Preparation of all working drawings and builders work drawings.				
7.4.8	Allow for all necessary drawing down, flushing out, re-filling and venting of all circuits. Allow to connect to all outlet points, connect to all cisterns and tap outlets.				
7.4.9	Include for sterilisation of all domestic water services from the new connection point and take samples from outlet points and obtain an independent analysis and confirmation of water purity.				

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7.4.10	Thermally insulate water services pipework, in compliance with The requirements of ISO 9000 and Thermal Insulation Manufacturers and Suppliers Association (TIMSA) guidance for achieving compliance with Part L of the Building Regulations.				
7.4.11	Undertake all pressure tests, balancing, commissioning and calibration.				
7.4.12	Full co-ordination with all trades on site.				
7.4.13	Operation and maintenance documentation				
*	Provide drawings and detailing from the base tender information to full construction standards as detailed previously. This shall include design responsibility for the following areas:				
	a) Support systems / brackets for all services.				
	b) Expansion and contraction within the system networks.				
	c) Final co-ordination of the mechanical and electrical services including the preparation of completely dimensioned double line services fabrication drawings.				
7.5	<u>Heating services</u>				
7.5.1	Contractor shall include for all materials, necessary tools, labour, all equipment to supply, install, commission and put into operation the following installations to BOTH dwellings:				
7.5.2	Provide, install, test and commission a gas fired, flue condensing boiler, located with the kitchen(s), for each dwelling. Contractor is to supply and install 'Valiant Eco Tech' or similar approved combination boiler.				
7.5.3	Provide, install, test and commission new gas services to support the new LTHW heating services installations.				
7.5.4	Provide, install, test and commission all wet low level radiators sufficiently sized for each room. Contractor to provide BTU calculation on request.				

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7.5.5	Install, test and commission all towel heater radiators 1nr to be located within each Bathroom.				
7.5.6	Provide, install, test and commission all necessary heating pipework, fittings, valves, brackets and fixings.				
7.5.7	Provide all necessary commissioning stations for system hydraulic balancing.				
7.5.8	The Electrical Contractor shall provide a switched fused spur adjacent to the boiler. The Mechanical Contractor shall complete all power and control wiring from this point onwards.				
7.5.9	Include for all necessary flushing, filling and venting of all services.				
7.5.10	Provide all necessary secondary supports in order that the new services may be supported from the building structure.				
7.5.11	Include for all testing, witnessed hydraulic pressure tests, balancing, venting and commissioning.				
7.5.12	Include for all thermal insulation in compliance with section two of this specification.				
7.5.13	Prepare and submit working drawings, builders work requirement drawings and 'As Fitted' drawings for approval / comments and construction purposes.				
7.5.14	Liaise and co-ordinate with all other trades on site.				
7.5.15	Provide Operating and Maintenance instruction manuals.				
7.5.16	Include for full user instruction, both written and in the form of demonstrations for each apartment.				
7.5.17	Provide drawings and detailing from the base tender information to full design and construction standards as detailed previously.				

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7.6	Surestop stop taps				
7.6.1	Both dwellings to be fitted with Surestop stop tap to the incoming mains water supply pipe. This shall be installed in strict accordance with the manufacturers instructions.				
7.6.2	The contractor shall Isolate the mains water supply.				
7.6.3	Where it is necessary to isolate the water main via the external stop tap the contractor must ensure neighbouring dwellings are not affected prior to the commencement of the work.(i.e where the stop tap is shared).				
7.6.4	The existing stop tap should remain in its existing location and the new Surestop unit will be installed to the adjoining pipework. Locations TBC on site.				
7.6.5	The contractor shall allow for the alteration of the existing pipe work to allow the installation before any draw-off points.				
7.6.6	Where access to the stop tap position is difficult and its operation is impeded, the contractor shall supply and fit a Surestop remote switch.				
7.6.7	Where stop taps are located in kitchens and require a remote switch they shall be installed in the base unit beneath the sink bowl.				
7.6.8	The switch shall be fixed with a single gang surface mounted patress.				
7.6.9	The switch shall be located on the side panel of the base unit, 30mm from the front edge of the base unit to provide convenient access. Fitting shall prevent tubing making contact with hinges and avoid potential entrapment.				
7.6.10	The tubing connected to the remote switch must be routed so that contact with hot pipes and surfaces is avoided. Routing through enclosed spaces must have adequate ventilation in order to avoid excessive temperatures to avoid premature defects in the tubing.				

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7.6.11	Loose tubing should be neatly clipped using 2.5mm twin and earth cable clips.				
7.6.12	The contractor shall commission the system on completion ensuring that the original stop tap is operating in a fully open position.				
7.6.13	As part of the commissioning process the contractor shall advise the tenant on operating the system and provide the manufacturers user guide.				

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8	<u>SANITARYWARE INSTALLATION</u>				
	Contractor to allow for the supply and installation of the following (to be read in conjunction with drawings 01-003, 01-006 to 01-008)				
8.1	Kitchen(s)				
8.1.1	Kitchen Sink :Leisure Lexin (LN95)two hole stainless steel sink or alike equivalent to BS EN 13310.	2	nr		
8.1.2	Kitchen Tap: Bristan lever deck sink mixer with 3" levers, chrome plated to BS EN 248 or alike equivalent to British Standards. The hot feed to have installed a blender valve to ensure the water supply from the tap does not exceed 38 degrees centigrade	2	nr		
8.2	Accessible Bathroom				
8.2.1	W.C - supply and install Armitage Shanks Doc M Contour 21 Close Coupled Pack RH ref: S6967 or similar approved. Pack includes: WC pan, water saving delay fill cistern with spatula lever, grab rails, hinged support rail with toilet roll holder, seat no cover with retaining buffers, copper tails on TMV3 mixer tap.	1	nr		
8.2.2	Shower - Chrome shower kit - 412655 Bristan Shower Kit Chrome KIT100C - Sealed pack.	1	nr		
8.2.3	Shower Tray - Contractor to allow for installing new GRP level access shower tray former 'Tuff form 1500x1200mm' or similar approved in the position indicated	1	nr		
8.2.4	Contractor must allow for altering and trimming the existing floor joists as required. The former must be fully supported on all four sides with additional joists/ noggins within the 110mm the centre of the waste outlet position to support the waste area. Contractor must also make provision for the waste outlet pipe exit route and below in one of the noggins supporting the waste area.				

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8.2.5	Wash Hand Basin - Lavatory basin 560mm and pedestal B65000-Ideal Standard OVA S2955 or alike equivalent to British Standards * Wash Hand basin lever taps pair - 534588 Bristian Design Utility lever Basin taps Chrome DUL1/ 2C * ECO WHB water flow limiter 6L per second - 534552 Bristian ECO Flow Limiter 6L Per minute Basin tap outlet white ECOTAP6.	1	nr		
8.2.6	Changing Table -The contractor shall allow to install Nivano Shower and Changing Table, wall mounted and electrically height adjustable, 150kg weight capacity, 1800 x 700mm. Nivano Table Guard, Length 1800mm. Nivano Table Guard Bumper, 1200-1900mm. Guard Bumper length 1800mm. Delivery and Installation of Hi-Lo Changing Table to power services according to pre-install requirements as per manufacturer's specification.	1	nr		
8.2.7	Contractor to allow a PC Sum for provision of additional electrical services to facilitate specialist equipment.	1	item		£1,000
8.3	Ground floor W.C.				
8.3.1	W.C. pan , (200295) , WC Toilet seat and cover (200303) Armitage Shanks B87300 or alike equivalent to British Standards * Orion S4045 WC cistern LL dual flush or alike equivalent to British Standards * Toilet seat and cover - Orion ref: B87300 54045	1	nr		
8.3.2	Wash Hand Basin - Lavatory basin 560mm and pedestal B65000-Ideal Standard OVA S2955 or alike equivalent to British Standards * Wash Hand basin lever taps pair - 534588 Bristian Design Utility lever Basin taps Chrome DUL1/ 2C * ECO WHB water flow limiter 6L per second - 534552 Bristian ECO Flow Limiter 6L Per minute Basin tap outlet white ECOTAP6.	1	nr		

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8.4	First Floor Bathroom(s)				
8.4.1	The contractor shall supply and fit the following products in accordance with manufactures recommendations and installation guides / best practice.				
8.4.2	W.C. pan , (200295) , WC Toilet seat and cover (200303) Armitage Shanks B87300 or alike equivalent to British Standards	2	nr		
*	Orion S4045 WC cistern LL dual flush or alike equivalent to British Standards				
*	Toilet seat and cover - Orion ref: B87300 54045				
8.4.3	Wash Hand Basin - Lavatory basin 560mm and pedestal B65000-Ideal Standard OVA S2955 or alike equivalent to British Standards	2	nr		
*	Wash Hand basin lever taps pair - 534588 Bristan Design Utility lever Basin taps Chrome DUL1/ 2C				
*	ECO WHB water flow limiter 6L per second - 534552 Bristan ECO Flow Limiter 6L Per minute Basin tap outlet white ECOTAP6.				
8.4.4	Bath - Pressed steel enamel bath to current British Standards - Twyford's 'Celtic' ref: A01895 - BS1572 WH 1700 2TH A/S TG BATH.	2	nr		
*	Include for MDF decorative bath panels 1700 - ref: Tavistock Milton A83207 Q313 1700 Front MDF Bath Panel white fixed onto and including softwood frame.				
*	Overbath shower - Bristan Utility Lever Thermo Combination in Chrome or alike equivalent to British Standards				
*	Bristan Shower Kit Chrome KIT 100C or alike equivalent to British Standards				
*	Proprietary straight or curved shower rail and curtain to suit layout.				
8.4.5	The contractor shall include all pipework, connectors, elbows, clips, traps, isolation valves etc as necessary to connect the new installation(s) to the existing / new water supply and drainage systems.				

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8.5	Boxing				
8.5.1	The Contractor shall allow a provisional sum of £1,500.00 for boxing in pipework generally. Boxing to be 18mm WBP BB/CC exterior grade plywood. Profile to be agreed with CA. Provisional sum will cover off decoration; 1no. Primer coat and 1no. Undercoat, prior to the application of a finishing coat and two coats of Johnstone Trade, or similar good quality gloss paint approved by the Contract Administrator. Colour: Pure Brilliant White	1	item		£1,500

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9	<u>DRAINAGE - Contractors Design Portion</u>				
9.1	External Drainage				
9.1.1	Contractor is to allow for detailed drainage design to allow connection of new underground drainage to the existing drainage system based on the indicative layout detailed in the tender documentation. The contractor shall allow for all builder's works and sundry items required in order to facilitate the drainage works. The specific performance requirements are detailed below:				
9.1.2	All private drainage works are to comply with the requirements of BS752 Building Drainage and Building Regulations Approved Document H.				
9.1.3	Locations and levels of existing drainage must be checked on site prior to the commencement of any drainage works.				
9.1.4	All existing services are to be located prior to the commencement of any drainage works where necessary protection or diversions to be undertaken to avoid conflict with the proposed works.				
9.1.5	New connections required at the foot of the stacks including penetrations through the ground floor wall and associated works for the connection to the existing below ground connection shall form part of the M+E contractors' works. Slow radius bends shall be installed at the foot of the stacks.				
9.1.6	When disconnecting the existing drainage pipework system to the WC areas in each phase, the remaining branches shall be arranged safely to maintain drainage to the W.C's on the other floors that will be remaining in use.				

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9.1.7	Any new connecting drainage pipework deemed necessary shall have a fall of at least 2.5° to the horizontal, or approximately 50mm per metre of pipe run. If the drainage pipe has an external run the pipe shall be insulated against frost.				
9.1.8	Any new discharge branches deemed necessary are to be separately connected to the stack.				
9.1.9	Offsets in the wet part of the stack should be avoided where possible; however where constraints dictate a change of direction, the offset shall be cross vented unless it exceeds three metres in length.				
9.1.10	Any new branch discharge pipes deemed necessary serving sinks, wash hand basins etc should be kept as short as practicable to reduce both self -siphonage and accumulation of sediment. Pipe branches shall be laid to gradients as recommended in BS EN 12056-2:2000.				
9.1.11	Generally, soil and waste fittings shall discharge into stacks vented to atmosphere. Sanitary appliances discharging waste water only at ground level may connect to stub-stacks (vented where necessary), external gullies or proprietary internal floor gullies where appropriate. Soil pipes at ground floor level shall be directly connected to the below ground/slab drainage; main stacks (providing the connection is within invert limits as defined in BS EN 12056-2:2000); or into stub stacks (vented where necessary) providing they are within flow rates as tabled in the above guide lines.				
9.1.12	Stack vents at the head of the drain shall be naturally aspirated above roof level to control pressure fluctuations within the drainage system. The vents shall terminate at a cowl. Certified mechanical air vents may be used in conjunction with natural vents (the preferred choice) in locations where structural and architectural restraints prohibit the use of naturally aspirated vents. Where air admittance valves are used elsewhere they shall comply with prEN 12380 and shall be sized in accordance with recommendations in BS12056-2-2000. Air admittance valves shall set above the flood level of the highest fitting and connect to the stack within the suspended ceilings.				

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9.2	Drainage below ground				
9.2.1	All excavations shall be carried out in accordance with BS 5931:1981 and BS 8004:1986. Only unwanted materials shall be carted away from site. All new formation levels below any new floors or external pavements to be free from top soil, vegetable matter or other organic material.				
9.2.2	Install 100mm nominal diameter approved propriety flexible jointed pipework to BS5481:1977 laid to minimum 1:60 fall, bedded in 100mm minimum granular material to BS 882:1992. To be generally installed in accordance with BS 8301:1985. Include for all bends, proprietary fittings and connectors. All backfill around pipework to be single sized granular material in accordance with BS 5955: Part 6 and BS EN 1295.				
9.2.3	Install new connections and inspection chambers on existing drainage run as shown on the indicative drawings. Excavate and break out as necessary and install preformed Osma or similar approved Inspection chambers.				
9.2.4	Inspection Chambers: Form new Inspection Chambers in Hepworth polypropylene type inspection chamber encased in 100mm concrete and placed on 150mm 1:3:6 concrete base, placed while concrete is wet. Invert of manhole to be determined on site. Manhole cover to be galvanised mild steel medium duty type with frame bedded in mortar used only where load will not exceed 2.5 tons.				
9.2.5	Upon excavation should any existing drainage run be exposed which are found to be disused should either be dug out and grouted up. If in use they are to be diverted or exposed and encased in concrete and back filled to the satisfaction of the building inspector.				

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9.2.6	Allow to make good all excavation, replacing damaged pre-cast concrete paving slabs with new, if required, and backfilling with displaced earth & soil to existing level to create even ground on completion of the works.				
9.2.7	The entire drainage system shall be hydraulically tested prior to completing the project.				
9.2.8	NB - Contractor to check all invert levels on site at tender submission stage and prior to commencing work to ensure the new drainage runs and connections are achievable. No allowance will be made for variations claimed where it is deemed foreseeable that the depth of any suitable excavation works could have been reasonably identified at tender submission stage				
9.3	Drainage Above Ground				
9.3.1	All waste pipes shall connect into straight vertical PVC-U 110mm diameter soil and vent pipe. Overflow pipes shall be taken from all cisterns and water tanks to discharge through the external wall at a suitable visible location.				
9.3.2	The whole drainage installation shall be airtight and able to withstand a pressure equal to 38mm on the manometer scale for a period of not less than three minutes after temperature stabilisation. To base of any new internal Soil vent pipe, fix inspection hatch for future cleaning and maintenance.				
9.3.2	Trap to all appliances shall have 75mm water seal. Waste Pipes and trap sizes shall be sized as set out below: * Overflow pipes - 19mm diameter * Wash hand basins - 32mm diameter with 40mm diameter waste to SVP * Sink - 40mm diameter with 40mm diameter waste to SVP * WC'S - 100mm diameter * Shower - 50mm diameter with 50mm diameter waste to SVP. Note waste to be installed beneath suspended floor level				

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9.4	Soil Vent Pipe				
9.4.1	Remove existing (pvc or cast) soil stack and associated pipework including the removal of fixing brackets and making good background to receive new. Lift / breakout surrounding paving, excavate 600mm at the base of the stack to expose the underground drainage connection				
9.4.2	Supply and fit new PVCu soil stack and branch pipe serving the existing and new outlets, ensuring all manufacturer markings face the building from view. Include for all fittings and vent terminal. Mechanically fix to brickwork at a maximum of 2m centres vertically and at 1m centres horizontally with brackets to suit.				
9.4.3	Supply and fit a universal pipe connector to enable connection to the existing underground drainage.				
9.4.4	Backfill excavations. Ground works shall be reinstated and made good to match existing adjacent surfaces. Include renewal of any associated paving.				
9.4.5	All gullies to be cleared of debris upon completion				

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10	<u>ELECTRICAL INSTALLATION - Contractors Design Portion</u>				
A	The building is to be split into two separate dwellings with separate services i.e. Gas, water and Electric.				
B	Contractor is to allow for the detailed electrical design for all new services as per indicative electrical drawing. The contractor shall allow for all builder's works and sundry items required in order to facilitate the works. The performance specification requirements are detailed below:				
C	It shall be the responsibility of the Statutory Authority via direct employment from the Client to extend existing primary electric supplies to the separated properties. The existing metering location for No 11 is to be used and the secondary metering location for property No 9 shall be located within a new recessed external meter box located adjacent to the front door. The contractor is responsible for the instruction, ordering and coordination of said supplies, and metering from the statutory provider, and is to allow for the connection of all new installations to new metered supplies.				
D	All new electrics to be installed by a credited NICEIC Contractor to the latest I.E.E. addition and amendments.				
10.1	General Requirements				
10.1.1	All electrical fittings/outlets are to be white, unless otherwise specified (sample to be provided for client prior to installation). All to be installed in strict accordance with manufacturer's recommendations. Allow for all back boxes as per manufacturer's recommendations. Sockets and light switches to be strictly fixed at heights agreed with the Client. Provisionally heights of sockets to be 450mm above floor level and light switches to be 1200mm above floor level.				

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10.1.2	Wiring to be run in the partitions. No wiring is to be surface mounted, or conduit is to be mounted where new works are to be undertaken.				
10.1.3	Provide all electrical outlet points/fittings as necessary for inactive layout, including for a fully comprehensive LD2 fire alarm system				
10.1.4	Allow for stripping out/relocating external cables as necessary where conflicting with new work etc. All sockets and switches not shown on the drawing all deemed to have been included in the works.				
10.2	Heating Systems				
10.2.1	Contractor shall allow for all works in attention of the new heating system and specifically shall provide a switched fused spur adjacent to the boiler.				
10.3	Consumer Units				
10.3.1	Contractor to allow for 2x new consumer units to be sited as per the Electrical Layout drawings. Contractor to take all necessary precautions where existing consumer units require removing and are affixed to asbestos containing materials.				
10.4	Mechanical fixtures				
10.4.1	To new and exiting bathrooms - contractor to supply and install new Vent Axia Lo Carbon Centra Timer SELV bathroom fan, 100mm, continuous running IPX7 rated . Product ref: 443175. Contractor to refer to manufactures recommended installation requirements.				
10.4.2	To all new and existing kitchens - contractor to supply and install new Vent Axia kitchen fan, 100mm, continuous running IPX4 rated. Product ref: 442954 Lo Carbon Centra Timer or alike equivalent to British Standards. Contractor to refer to manufactures recommended installation requirements.				

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10.5	LIGHTING INSTALLATION				
10.5.1	<p>Contractor to supply and install 'General Lighting by ASD Lighting plc.</p> <p style="text-align: center;">ASD Lighting plc Mangham Road Barbot Hall Industrial Estate Rotherham S61 4RJ England Tel: 01709 374898</p> <p>Specific Requirements Detailed Below:</p> <ul style="list-style-type: none"> * Bathroom - IPX4 light fitting, Fern Howard 14W icebreaker - Round white base with opal diffuser LED (FHBL-20-095) or alike equivalent to British Standards * External Lighting - Supply and fix ASD Half Lantern HL/BKLED3P Low level external lighting adjacent to the front and rear doors of the property. Height to be 1600mm measured from the door threshold - dimensions subject to confirmation on site for each archetype, and subject to manufacturers instructions. * All wiring is to be routed so as minimal trunking is used. * External trunking is to be 20mm black tubular type secured to the building with appropriate clips. 				
10.6	Smoke detectors				
10.6.1	The contractor shall supply and fit hardwired , optical smoke heat detectors each incorporating a radio link base and rechargeable lithium battery. One smoke detector is to be provided per floor level, within circulation spaces (i.e. hall & landing). The contractor shall supply and fit a hardwired heat detector with radio link base located in the kitchen.				
10.6.2	Care should be taken that the detectors are sited in locations which minimise the likelihood of false alarms.				
10.6.3	The smoke detectors shall be linked so that in the event of operation the other alarms are activated; providing an "early warning" system.				
10.6.4	Contractor shall supply a battery operated radio linked controller / test switch				

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10.6.5	The whole installation shall comply with the current Building Regulations and British Standards.				
10.6.6	On completion of the test, an Inspection Certificate based upon the current I.E.E. Wiring Regulations, shall be completed by the Contractor.				

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11	<u>DECORATIONS</u>				
11.1	Decorations to Ceilings (new and existing)				
11.1.1	<p>Prepare all surfaces ready to receive new decorations. Fill any cracks and make good any small surface defects with a compatible proprietary interior filler or fine surface filler as appropriate, in accordance with the manufacture's instructions.</p> <p>Apply three coats (+mist coat for new plaster) minimum or as many as required to prevent grinning of Crown Matt Emulsion, or similar, good quality paint, approved by the Contract Administrator in colour pure brilliant white.</p>				
11.2	Decorations to Walls (new and existing)				
11.2.1	<p>Prepare all surfaces ready to receive new decorations. Fill any cracks and make good any small surface defects with a compatible proprietary interior filler or fine surface filler as appropriate, in accordance with the manufacturer's instructions.</p> <p>Apply three coats minimum (+mist coat for new plaster) or as many as required to prevent grinning of Crown Matt Emulsion, or similar, good quality paint, approved by the Contract Administrator in colour to be determined by the employer.</p>				
11.2.2	<p>For purposes of estimating allow following colours from Crown "or similar range":-</p> <ul style="list-style-type: none"> * Kitchens - Crown Matt Vinyl emulsion Autum Mist A7740H or Pebble OOA01 * Bathrooms - Crown Matt Vinyl emulsion Autum Mist A7740H or Pebble OOA01 * Provide 1 no. coat undercoat and 2 coats Crown paint finish to all remaining walls throughout. Colour - Provincial Yellow (confirm with Unitas SOT Ltd prior to ordering) 				

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<p>11.3</p>	<p>Decoration to Joinery</p>				
<p>11.3.1</p>	<p>To all new and existing skirting boards, architrave, frames, windows, cills and paint grade doors and all other joinery members, the contractor is to provide knot treatment, 1no. Primer coat and 1no. Undercoat, prior to the application of a finishing coat. Except where products are supplied factory primed. Apply two coats of Crown, or similar good quality gloss paint approved by the Contract Administrator. Colour pure brilliant white throughout.</p>				
<p>11.4</p>	<p>Wall Tiling Preparation</p>				
<p>11.4.1</p>	<p>Before tiling is started, surfaces should be dry, clean, and free from grease, loose material or any substance likely to prove harmful to the bond or the intended finished appearance of the tiling.</p>				
<p>11.4.2</p>	<p>In wet areas, tiles should be solidly bedded in adhesive. Tiles should be fixed in straight and even courses to form a plane surface. Work should be of a straight and regular appearance.</p>				
<p>11.4.3</p>	<p>Joints should be even and cutting neatly carried out, ensuring that spacing is sufficient to allow expansion. Wall tiles, fitted using proprietary waterproof cement based adhesive to BS EN 12004 Type C2F S1 on beds of between 3 – 6mm.</p>				
<p>11.5</p>	<p>Kitchen Tiles</p>				
<p>11.5.1</p>	<p>Wall Tiling: 200 x 100mm Metro bevelled edge ceramic tiles in the location as indicated above and as per the layout on drawing ref 01-003 general layout and kitchen manufacturers details contained as an appendix to this schedule of works.</p>				
<p>11.5.2</p>	<p>Splash backs to be formed using 3 rows in height to the perimeter of the worktops and all exposed edges finished with pvc trim 1.2mm x 2mm, tile corners to be 2mm.</p>				
<p>11.6</p>	<p>Bathroom / WC Tiles</p>				
<p>11.6.1</p>	<p>Tiling - Provide ceramic wall tiles 200mm x 250mm Large "Bumpy" to the areas as indicated on drawing 01-006 to 01-008.</p>				

SECTION 3 SCHEDULE OF WORKS

Schedule of Works

DOCUMENT USE: Contractor is responsible for applying and verifying all arithmetical formulas to this excel document to safeguard the validity of their own tender.

11.6.2	Splash backs to be formed using 3 rows in height to the wash hand basin and all exposed edges finished with pvc trim 1.2mm x 2mm, tile corners to be 2mm.				
11.6.3	Splash backs to be fitted vertically adhered with a proprietary waterproof cement based adhesive to BS EN 12004 Type C2F S1, on beds of between 3 – 6mm.				
11.6.4	The Accessible shower 'wet area' will be fully tiled including for all cutting, edges, angles & finish with a silicone sealant bead in corners and perimeter of the bath in accordance with the existing contract.				
11.6.5	The shower 'wet area' to the baths will be fully tiled including for all cutting, edges, angles & finish with a silicone sealant bead in corners and perimeter of the bath in accordance with the existing contract. The remainder of the bath area allow for 3 rows splash back tiling as described elsewhere.				

Unitas
9-11 The Square Residential Conversion Works



SECTION 3 SCHEDULE OF WORKS

Schedule of Works

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Item	Description of Work	Quantity	Unit	Rate	Costs
12	<u>FLOOR FINISHES</u>				
12.1	Timber Subfloor Preparation				
12.1.1	Following preparation, floors are to be even & flush, prior to laying any coverings.				
12.1.2	Any damaged, holed or degrading floorboards are to be renewed to match the profile of the existing floor. Chipboard flooring shall be P5 moisture resistant grade, 18mm thick to BS EN 312-2010 suitable for the purpose and used strictly in accordance with the manufacturer's instructions.				
12.1.3	Where required the floor shall be covered with a suitably graded plywood prior to the final vinyl covering being laid. Contractors to ensure all threshold strips are fitted to doorway(s), including any easing, adjusting and cutting to doors if required				
12.2	Concrete Subfloors Preparation				
12.2.1	The subfloor must be hard, smooth, clean, dry, free from defects and fit for purpose.				
12.2.2	Where required the contractor shall scrape off and remove old adhesives and loose laying levelling compound, ensuring the subfloor is flat and free from chemical substances and grease.				
12.2.3	A suitable levelling compound should be used to ensure that no irregularities show through to the surface of the finished floor.				
12.2.4	Installation should be carried out in accordance with BS8203-2001. No irregularities are to show through to the surface of the finished floor in any event.				

Unitas
9-11 The Square Residential Conversion Works



SECTION 3 SCHEDULE OF WORKS

Schedule of Works

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<p>12.3</p>	<p>Carpet Covering</p>				
<p>12.3.1</p>	<p>The contractor is supply and fit QA FloorSure Silver Value Carpet underlay 8mm or similar approved throughout and supply and install Heavy Duty Residential sound absorption Class C carpet sheet flooring (80/20 Wool Nylon) to areas as indicated. Installation to be carried out in accordance with the manufacturers recommendations. The contractor is to provide samples to the Contract Administrator for approval prior to ordering materials.</p>				
<p>12.4</p>	<p>Vinyl Covering</p>				
<p>12.4.1</p>	<p>Contractor to supply and install 'Gerflor Taralay Impression COMPACT' wood Multi-layered flooring. Ref: 0519 Norma Beige, being multi layered textile backed vinyl floor covering consisting of a slip resistant coated 0.25mm wear layer, bonded to a glass fibre mesh,an anti mildew bonding layer onto a polyester textile backing.</p>				
<p>12.4.2</p>	<p>The contractor is to include for Part M compliant threshold strips and trims to adjoining floor finishes as required. Including any easing and adjusting and cutting of doors as required. Installation should be carried out in accordance with BS8203-2001.</p>				

SECTION 3 SCHEDULE OF WORKS

Schedule of Works

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Item	Description of Work	Quantity	Unit	Rate	Costs
13	<u>External Works</u>				
13.1	Boundary Walls				
13.1.1	Prepare existing foundations ready to receive new boundary wall treatment to perimeter of both properties.				
13.1.2	Allow for breaking out 4x sections of existing foundations to form new pad foundations for new brickwork piers for new entrance gates. New foundations to match existing in terms of depth. For the purposes of estimating allow for excavating to a depth of 750mm and for forming new 600 x 600mm ² pad				
13.1.3	Form new 600x600x200mm pad foundations in 4no locations in C10 / Gen 1 concrete ready to receive new gate pillars.				
13.1.4	Rebuild 600mm high (above ground level) 225mm thick boundary wall laid in English bond using class B Engineering brick (below ground level) and facing brickwork (above ground level) allow for blue drag face brickwork using M4/ class (iii) sulphate resisting mortar resting on existing foundations				
13.1.5	Construct 10mm vertical movement joints in brickwork at a maximum spacing of 6m centres				
13.1.6	On new pad foundations build 300mm ² by 750mm high brickwork piers in blue drag faced brickwork to form new entrance gates, minimum 1200mm wide				
13.2	Existing Tarmac Surfaces				
13.2.1	Following removal of vegetation allow for thoroughly cleaning down existing tarmac surfaces shown as being retained on drawing reference 01-014.				

SECTION 3 SCHEDULE OF WORKS

Schedule of Works

DOCUMENT USE: Contractor is responsible for applying and verifying all arithmetical formulas to this excel document to safeguard the validity of their own tender.

13.3	Patio / Paving / Paths				
13.3.1	Following excavation of tarmac surfaces (as shown on drawing reference 01-014) minimum reduced depth of at least 200mm below finished level. Include for recasting any soft spots in sub-grade as required and dispose.				
13.3.2	Form all new paths / patios as shown on drawing reference 01-014				
13.3.3	Supply, lay and compact minimum of 100mm of DTp1 crushed stone sub base material laid level. Contractor to review existing tarmac sub base prior to removal if found to be of suitable depth and material existing materials to be reused and costs for disposal and new imported material to be omitted. All works to be reviewed and instructed by CA prior to undertaking. For the purposes of estimating allow for removal and new.				
13.3.4	Supply and lay 900x600x50 pcc flags, natural colour with full mortar joints (10mm) on 40mm 10:1 grit sand / cement full bed. Include for all cuts and pointing.				
13.3.5	To front allow for raising pcc flags to form 1500 x 1500mm level landing with maximum 1:15 pcc ramp leading to landing as shown. Retain edges with pcc slab on edge in C7.5 concrete bed and haunch. Include for keyclamp or similar 33.7mm diameter tubular metal handrail to entrance with mid rail as required.				
13.3.6	To rear allow for providing raised patio area across entirety of recessed section of elevation to provide level access from rear entrance. Include for ramp down to garden maximum 1:15 pcc ramp leading to landing as shown. Retain edges with pcc slab on edge in C7.5 concrete bed and haunch. Include for keyclamp or similar 33.7mm diameter tubular metal handrail to entrance with mid rail as required.				
13.3.7	To perimeter of rear raised patio install aco drainage gully suitable for load class A 15 connected into existing rainwater gully				

SECTION 3 SCHEDULE OF WORKS

Schedule of Works

DOCUMENT USE: Contractor is responsible for applying and verifying all arithmetical formulas to this excel document to safeguard the validity of their own tender.

13.4 Fencing				
13.4.1	To rear of both properties, party wall line and side elevation of No 11 allow for installing new pressure treated 1.8m high close boarded timber fence panels to enclose garden areas.			
13.4.2	Allow for 60x60mm posts suitable to receive 1.8m high timber fence panels at 1.88 centres. Set in 300mm ² 8:1 ballast and cement concrete, angled to shed water			
13.4.3	Include for post caps to each fence post.			
13.5 Soft Landscaping				
13.5.1	Provide new soil over excavated areas to BS 3882: 2015			
13.5.2	Allow for suitable sub soil base minimum 200mm with 100mm good quality vegetation free top soil over, leveled, lightly consolidated and free from surface stone and other debris			
13.5.3	Grass seed to be sown over by hand no later than 31st October, seed to comply to BS 4428 , sown seed to be firmed in by roller to provide good contact with prepared top soil.			

SECTION 3 SCHEDULE OF WORKS

Schedule of Works

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Item	Description of Work	Quantity	Unit	Rate	Costs
13	<u>COMPLETION</u>				
13.1	On completion of the site operations remove from site all debris associated with the works and leave the area clean and tidy ready for reoccupation by the client and to the satisfaction of the Contract Administrator. All plant and equipment etc. are to be removed from site in preparation for occupation.				
13.2	CONTINGENCIES AND PROVISIONAL SUMS				
13.2.1	Include the following provisional sums and contingencies for work or costs which cannot be foreseen, defined or detailed, to be expended on the written instruction of the CA deductible wholly or in part if not required.				
13.2.2	Allow a provisional sum of £1,000.00 to dismantle existing tenant's 'soft play' bedroom space and transport to the new property.				
13.2.3	Allow a Provisional Sum of £2,000.00 for brickwork repairs / fixing details.				
13.2.4	Allow a Provisional Sum of £2,000.00 for strengthening of existing rafters for new hoist track.				
13.2.5	Allow a Provisional Sum of £2,000.00 for undertaking additional excavation works not included as part of contractors design portion.				
13.2.6	Allow a contingency sum of 10% of the total works value as a contingency sum only to be expended upon the written instruction of the contract administrator.				

4. Materials and Workmanship



4. Materials and Workmanship

C20 DEMOLITION

To be read with Preliminaries/ General conditions.

GENERAL REQUIREMENTS

110 DESK STUDY/ SURVEY

- Scope: Before starting deconstruction/ demolition work, examine available information, and carry out a survey of:
 - the structure or structures to be deconstructed/ demolished,
 - the site on which the structure or structures stand, and
 - the surrounding area.
- Report and method statements: Submit, describing:
 - Form, condition and details of the structure or structures, the site, and the surrounding area.
 - Type, location and condition of features of historical, archaeological, geological or ecological importance.
 - Type, location and condition of adjoining or surrounding premises that might be adversely affected by removal of the structure or structures, or by noise, vibration and/ or dust generated during deconstruction/ demolition.
 - Identity and location of services above and below ground, including those required for the Contractor's use, and arrangements for their disconnection and removal.
 - Form and location of flammable, toxic or hazardous materials, including lead-based paint, and proposed methods for their removal and disposal.
 - Form and location of materials identified for reuse or recycling, and proposed methods for removal and temporary storage.
 - Proposed programme of work, including sequence and methods of deconstruction/ demolition.
 - Details of specific pre-weakening required.
 - Arrangements for protection of personnel and the general public, including exclusion of unauthorized persons.
 - Arrangements for control of site transport and traffic.

120 EXTENT OF DECONSTRUCTION/ DEMOLITION

- General: Subject to retention requirements specified elsewhere, deconstruct/ demolish structures down to concrete slab on Ground floor and timber floor boards to first floor.

SERVICES AFFECTED BY DECONSTRUCTION/ DEMOLITION

210 SERVICES REGULATIONS

- Work carried out to or affecting new and/ or existing services: Carry out in accordance with the byelaws and/ or regulations of the relevant Statutory Authority.



220 LOCATION OF SERVICES

- Services affected by deconstruction/ demolition work: Locate and mark positions.
- Mains services marking: Arrange with the appropriate authorities for services to be located and marked.
- Marking standard: In accordance with National Joint Utilities Group 'Guidelines on the positioning and colour coding of underground utilities' apparatus'.

230 SERVICES DISCONNECTION ARRANGED BY CONTRACTOR

- General: Arrange with the appropriate authorities for disconnection of services and removal of fittings and equipment owned by those authorities prior to starting deconstruction/ demolition.

240 DISCONNECTION OF DRAINS

- General: Locate, disconnect and seal disused foul and surface water drains.
- Sealing: Permanent, and within the site.

250 LIVE FOUL AND SURFACE WATER DRAINS

- Drains and associated manholes, inspection chambers, gullies, vent pipes and fittings:
- Protect; maintain normal flow during deconstruction/ demolition.
- Make good any damage arising from deconstruction/ demolition work.
- Leave clean and in working order at completion of deconstruction/ demolition work.

260 SERVICE BYPASS CONNECTIONS

- General: Provide as necessary to maintain continuity of services to occupied areas of the site on which the deconstruction/ demolition is taking place and to adjoining sites/ properties.
- Minimum notice to adjoining owners and all affected occupiers: 72 hours, if shutdown is necessary during changeover.

270 SERVICES TO BE RETAINED

- Damage to services: Give notice and notify relevant service authorities and/ or owner/ occupier regarding damage arising from deconstruction/ demolition.
- Repairs to services: Complete as directed, and to the satisfaction of the service authority or owner.

DECONSTRUCTION/ DEMOLITION WORK

310 WORKMANSHIP

- Standard: Demolish structures in accordance with BS 6187.
- Operatives:
 - Appropriately skilled and experienced for the type of work.
 - Holding, or in training to obtain, relevant CITB Certificates of Competence.
 - Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of deconstruction/ demolition to be used.

Total to Collection:
£

£



- 320 GAS OR VAPOUR RISKS
- Precautions: Prevent fire and/ or explosion caused by gas and/ or vapour from tanks, pipes, etc.
- 330 DUST CONTROL
- General: Reduce airborne dust by periodically spraying deconstruction/ demolition works with an appropriate wetting agent. Keep public roadways and footpaths clear of mud and debris.
 - Lead dust: Submit method statement for control, containment and clean-up regimes.
- 340 HEALTH HAZARDS
- Precautions: Protect site operatives and general public from hazards associated with vibration, dangerous fumes and dust arising during the course of the Works.
- 350 ADJOINING PROPERTY
- Temporary support and protection: Provide. Maintain and alter, as necessary, as work proceeds. Do not leave unnecessary or unstable projections.
 - Defects: Report immediately on discovery.
 - Damage: Minimize. Repair promptly to ensure safety, stability, weather protection and security.
 - Support to foundations: Do not disturb.
- 370 PARTLY DEMOLISHED STRUCTURES
- General: Leave in a stable condition, with adequate temporary support at each stage to prevent risk of uncontrolled collapse. Make secure outside working hours.
 - Temporary works: Prevent overloading due to debris.
 - Access: Prevent access by unauthorized persons.
- 380 DANGEROUS OPENINGS
- General: Provide guarding at all times, including outside of working hours. Illuminate during hours of darkness.
 - Access: Prevent access by unauthorized persons.
- 391 ASBESTOS-CONTAINING MATERIALS - UNKNOWN OCCURRENCES
- Discovery: Give notice immediately of suspected asbestos-containing materials when discovered during deconstruction/ demolition work. Avoid disturbing such materials.
 - Removal: Submit statutory risk assessments and details of proposed methods for safe removal.
- 410 UNFORESEEN HAZARDS
- Discovery: Give notice immediately when hazards such as unrecorded voids, tanks, chemicals, are discovered during deconstruction/ demolition.
 - Removal: Submit details of proposed methods for filling, removal, etc.

Total to Collection:
£

£



450 SITE CONDITION AT COMPLETION

- Debris: Clear away and leave the site in a tidy condition.

MATERIALS ARISING

510 CONTRACTOR'S PROPERTY

- Components and materials arising from the deconstruction/ demolition work: Property of the Contractor except where otherwise provided.
- Action: Remove from site as work proceeds where not to be reused or recycled for site use.

520 RECYCLED MATERIALS

- Materials arising from deconstruction/ demolition work: Can be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification and in accordance with any site waste management plan.
- Evidence of compliance: Submit full details and supporting documentation.
- Verification: Allow adequate time in programme for verification of compliance.

Total to Collection:
£

£



C41 REPAIRING/ RENOVATING/ CONSERVING MASONRY

To be read with Preliminaries/ General conditions.

GENERAL/ PREPARATION

110 SCOPE OF WORK

- Records of masonry to be repaired: Before starting work, use measurements and photographs as appropriate to record bonding patterns, joint widths, special features, etc.
- Identification of masonry units to be removed, replaced or repaired: Mark clearly, but not indelibly, on face of masonry units or parts of units to be cut out and replaced. Transcribe markings to drawings/ photographs.

120 SITE INSPECTION

- Purpose: To confirm type and extent of repair/ renovation/ conservation work shown on drawings and described in survey reports and schedules of work.

125 REMOVAL OF FITTINGS/ FIXTURES

- Items to be removed and reinstated on completion of repair work: refer to schedule of works.
- Identification: Attach labels or otherwise mark items using durable, non-permanent means, to identify location and describe refixing instructions, where applicable.
- Storage: Protect against damage, and store until required.
- Reinstatement: Refit in original locations using original installation methods.
- Masonry fabric and surfaces: Do not damage during removal and replacement of fittings/ fixtures.

130 REMOVAL OF PLANT GROWTHS FROM MASONRY

- Plants, root systems and associated soil/ debris: Carefully remove from joints, voids and facework.
- Removal of roots: Where growths cannot be removed completely without disturbing masonry seek instructions.
- Unwanted plants close to masonry: Where removal of root system is not possible or desirable, cut through stem as close to the ground as possible. Remove bark from stump and apply herbicide paste. Leave stump to wither.

140 RECORD OF WORK

- General: Record work carried out to masonry clearly and accurately using written descriptions, sketches, drawings and photographs, as necessary.
- Documentation: Submit on completion of the work.
- Number of sets: 2.

Total to Collection:
£

£



WORKMANSHIP GENERALLY

- 150 POWER TOOLS
- Usage for removal of mortar: rake out defective mortar by mechanical means to a depth of 20mm.
- 155 PUTLOG SCAFFOLDING
- Usage: N/A.
- 160 PROTECTION OF MASONRY UNITS AND MASONRY
- Masonry units: Prevent overstressing during transit, storage, handling and fixing. Store on level bearers clear of the ground, separated with resilient spacers. Protect from adverse weather and keep dry. Prevent soiling, chipping and contamination. Lift units at designed lifting points, where provided.
 - Masonry: Prevent damage, particularly to arrises, projecting features and delicate, friable surfaces. Prevent mortar/ grout splashes and other staining and marking on facework. Protect using suitable nonstaining slats, boards, tarpaulins, etc. Remove protection on completion of the work.
- 165 STRUCTURAL STABILITY
- General: Maintain stability of masonry. Report defects, including signs of movement, that are exposed or become apparent during the removal of masonry units.
- 170 DISTURBANCE TO RETAINED MASONRY
- Retained masonry in the vicinity of repair works: Disturb as little as possible.
 - Existing retained masonry: Do not cut or adjust to accommodate new or reused units.
 - Retained loose masonry units and those vulnerable to movement during repair works: Prop or wedge so as to be firmly and correctly positioned.
- 180 WORKMANSHIP
- Skill and experience of site operatives: Appropriate for types of work on which they are employed.
 - Documentary evidence: Submit on request.
- 185 ADVERSE WEATHER
- General: Do not use frozen materials or lay masonry units on frozen surfaces.
 - Air temperature: Do not bed masonry units or repoint:
 - In cement gauged mortars when ambient air temperature is at or below 3°C and falling or unless it is at least 1°C and rising, unless mortar has a minimum temperature of 4°C when laid and the masonry is adequately protected.
 - In hydraulic lime:sand mortars when ambient air temperature is at or below 5°C and falling or unless it is at least 3°C and rising.
 - In nonhydraulic lime:sand mortars in cold weather, unless approval is given.
 - Temperature of the work: Maintain above freezing until mortar has fully set.
 - Rain, snow and dew: Protect masonry by covering during precipitation, and at all times when work is not proceeding.

Total to Collection:
£

£



- Hot conditions and drying winds: Prevent masonry from drying out rapidly.
- New mortar damaged by frost: Rake out and replace.

190 CONTROL SAMPLES

- General: Complete an area of each of the following types of work, and arrange for inspection before proceeding with the remainder: mortar repairs, brickwork panels for forming new external doorways, external wall insulation final render coat, brick slips.

MATERIALS/ PRODUCTION/ ACCESSORIES

210 ADVANCE REGISTRATION

- Material registered in advance by the Employer: Obtain from the supplier named in Preliminaries section A56.
- Ordering: Supersede the Employer's registration and take over responsibility by an order to the supplier covering price, supply and delivery to suit the progress of the work.

215 MATERIAL SAMPLES

- Representative samples of designated materials: Submit before placing orders.
- Designated materials: external wall insulation render finish, brick slips, roof tiles.
- Retention of samples: Unless instructed otherwise, retain samples on site for reference. Protect from damage and contamination.

220 RECORDING PROFILES

- Profiles: Take measurements from existing masonry units, as instructed, to allow accurate matching of replacements.
- Recording in situ: If there are no suitable joints to allow use of inserts, seek instructions.
- Drawings and templates: Prepare as necessary. Templates must be clearly and indelibly marked to identify use and location.

260 BRICKS

- To match the existing to employers approval.

265 SALVAGED AND SECOND HAND BRICKS

- Condition:
 - Free from matter such as mortar, plaster, paint, bituminous materials and organic growths.
 - Sound, clean and reasonably free from cracks and chipped arrises.

DISMANTLING/ REBUILDING

310 DISMANTLING MASONRY FOR REUSE

- Masonry units to be reused: Remove carefully and in one piece.
- Treatment: Clean off old mortar, organic growths and dirt, and leave units in a suitable condition for rebuilding.



- Identification: Mark each unit clearly and indelibly on a concealed face, indicating its original position in the construction. Transcribe makings to drawings/ photographs.

320 REBUILDING

- Rebuilding: To match previous face and joint lines, joint widths and bonding. Adequately bonded to retained work/ backing masonry, as appropriate.
- Joint surfaces: Dampen, as necessary, to control suction.
- Laying masonry units: On a full bed of mortar; perpend joints filled.
- Exposed faces: Remove mortar and grout splashes immediately.

REPLACEMENTS AND INSERTIONS

330 PREPARATION FOR REPLACEMENT MASONRY

- Defective material: Carefully remove to the extent agreed. Do not disturb, damage or mark adjacent retained masonry.
- Existing metal fixings, frame members, etc: Report when exposed.
- Redundant metal fixings: Remove.
- Recesses: Remove projections and loose material; leave joint surfaces in a suitable condition to receive replacement units. Protect from adverse weather if units are not to be placed immediately.

365 REPLACEMENT OF BRICKS

385 LAYING REPLACEMENT MASONRY UNITS

- Exposed faces of new material: Keep to agreed face lines.
- Faces, angles and features: Align accurately. Set out carefully to ensure satisfactory junctions with existing masonry and maintain existing joint widths.
- Joint surfaces: Dampen to control suction as necessary.
- Laying units: On a full bed of mortar, all joints filled.
- Exposed faces: Keep clear of mortar and grout.

390 GROUTING JOINTS

- Joints that cannot be fully filled with bedding mortar: Grout thoroughly around replacement masonry units.
- Grouting: Keep grout back from exposed face to allow for the depth of pointing, using an approved temporary sealing material. Prevent grout staining exposed face.

MORTAR REPAIRS

510 PREPARATION FOR MORTAR REPAIRS

- Repair area: Scribe area of masonry to be removed using straight horizontal and vertical lines parallel to joints. Where repair area abuts joints, maintain existing joint widths and do not bridge joints.
- Decayed masonry: Cut back carefully to a minimum depth of 20 mm to a sound background. Where the depth of removal exceeds 50 mm, seek instructions.



- Precautions: Do not weaken masonry by removing excessive material. Do not damage adjacent masonry.
- Top and vertical reveals of repair area: Undercut.

540 APPLYING MORTAR

- Surfaces to receive mortar: Clean, and free from dust and debris. Dampen to control suction.
- Applying coats: Build up in layers to specified thickness. Apply mortar firmly, ensuring good adhesion with no voids. Form a mechanical key to undercoats by combing or scratching to produce evenly spaced lines.
- Allow each layer to achieve an initial set before applying subsequent coats. Prevent each layer from drying out rapidly by covering immediately with plastics sheeting and/ or dampening intermittently with clean water.
- Finishing mortar coat: Form accurately to required planes/ profiles, and finish flush with adjacent masonry.
- Protection: Protect completed repairs from adverse weather until mortar has set.

550 SCRAPED FINISH TO MORTAR REPAIRS

- Procedure: Finish final coat of repair mortar proud of existing masonry face. When mortar is set, but not too hard, scrape back to required face line using fine saw blade or other suitable means, to achieve required finish.

555 FLOAT FINISH TO MORTAR REPAIRS

- Finish: Use a wood float and/ or a felt faced float to give an even overall texture. Do not use steel floats.

CRACK REPAIRS/ TIES/ REINFORCEMENT

610 MORTAR REPAIR OF CRACKS

- Mortar: As section Z21.
- Preparation: Clean out cracks to remove debris, dust and dirt. Dampen recesses, as necessary, to control suction.
- Applying mortar: Press well into cracks so that they are fully filled. Ensure that mortar does not encroach upon exposed faces. Finish mortar flush with masonry face.
- Other requirements: N/A.

POINTING/ REPOINTING

810 PREPARATION FOR REPOINTING

- Existing mortar: Working from top of wall downwards, remove mortar carefully, without damaging adjacent masonry or widening joints, to a minimum depth of 20mm
- Loose or friable mortar: Seek instructions when mortar beyond specified recess depth is loose or friable and/ or if cavities are found.
- Raked joints: Remove dust and debris.



840 POINTING WITH TOOLS/ IRONS

- General: Press mortar well into joints using pointing tools/ irons that fit into the joints, so that they are fully filled.
- Face of masonry: Keep clear of mortar. Use suitable temporary adhesive tape on each side of joints where necessary. Finish joints neatly.

Total to Collection:
£

£



C45 DAMP PROOF COURSE RENEWAL/ INSERTION

To be read with Preliminaries/ General conditions.

115 SURVEY AND REPORT

- Survey generally:
 - Purpose: To confirm presence and extent of rising damp and suitability of walls for treatment by the proposed dpc system.
 - Timing: Before starting dpc installation work carry out survey and submit survey report.
 - Location of drilled samples: Submit proposals.
- Survey report content:
 - Extent of rising damp: Determine using methods recommended in the Property Care Association 'Code of Practice for the installation of remedial damp proof course in masonry walls', clause 6.
 - Proposals: Submit levels and positions of horizontal and vertical dpcs.
 - Associated work: Nature and extent of repair and/ or replacement work required to ensure an effective dpc.
 - Limitations: Identify areas where a full survey could not be carried out.
 - Other information: Any considered relevant.

135 ASSOCIATED WORK

- Work shown to be necessary by the survey: internal repairs to damp damaged plaster, drying out of walls and insertion of liquid DPC to all elevations.

140 BEFORE DPC INSTALLATION

- Positions of dpcs not shown on drawings: Submit proposals.
- Internal finishes: Remove only sufficient to expose the proposed line of dpc.
- Fungal or beetle attack to timber sections: Report occurrences.

150 REMOVAL OF EXTERNAL RENDER

- Extent of removal (maximum): 100 mm above proposed dpc level.

165 REPOINTING OF WALLS

- Location: On line of proposed dpc.
- Timing: Before installation of chemical injection dpcs.
- Mortar: As section Z21.
 - Mix: to match existing.

220 CHEMICAL INJECTION DPC SYSTEM

- Manufacturer: Triton.
 - Product reference: Tri-Cream.
- Installation: in strict accordance with manufacturer's instructions.

Total to Collection:
£

£



250 MAKING GOOD TO EXPOSED INJECTION HOLES

- Mortar mix: A type recommended by the chemical injection dpc system manufacturer to match existing masonry in colour and texture.
- Installation: Fully fill holes. Finish neatly and flush.
- Approval of appearance: Obtain for first few holes before completing the remainder.

251 MAKING GOOD TO EXPOSED INJECTION HOLES

- Sealing holes: Use plastics plugs, colour matched to masonry.
- Installation: Fit securely and neatly.

260 GUARANTEE

- Type: Insured protection. Administered by an independent insurance protection company.
- Guarantee period from completion of installation (minimum): 20 years.
- Documentation: Provide certificates/ guarantees at completion of installation.

Total to Collection:
£

£



C52 FUNGUS/ BEETLE ERADICATION

To be read with Preliminaries/ General conditions.

5 SURVEY AND REPORT

- Survey generally:
 - Purpose: To ascertain nature and extent of fungal/ beetle attack. To ascertain sources and extent of any dampness.
 - Timing: Before starting eradication work carry out survey and submit survey report.
- Survey report content:
 - Description of method of investigation.
 - Factors affecting execution of the work: Identify problematic site conditions and restrictions including the presence of bats, barn owls, other protected species or breeding birds.
 - Laboratory results identifying attacking organisms. Plan and section drawings or annotated photographs, defining extent of attack.
 - Proposals for eradication treatments and procedures, including measures to halt damp penetration and promote drying out.
 - Measurements of wood moisture content, with identification of instances above 20%.
 - Identification of neighbouring buildings that may be involved in attack.
 - Associated work: Nature and extent of repair/ replacement work required to load bearing constructions and to the building fabric in general.
 - Other information: Any considered relevant.

26 FUNGAL ATTACK

- Wet rot:
 - Decayed timber to be removed: Cut out until sound timber is reached.
 - Infected/ decayed material to be retained: Obtain instructions.

30 BEETLE INFESTATION

- Infected timber: Cut, scrape and trim back to sound timber. Remove debris immediately and dispose of safely.

37 TIMBER PRESERVATIVES/ MASONRY FUNGICIDES GENERALLY

- Products: Registered by the Health and Safety Executive (HSE) and listed on the HSE website under non-agricultural pesticides.
- Application: In accordance with statutory conditions of approval given on product labels and manufacturers' recommendations.

70 GUARANTEE

- Type: Insured protection. Administered by an independent insurance protection company.
 - Guarantee period from completion of installation (minimum): 10 Years
 - Documentation: Provide certificates/ guarantees at completion of treatment.

Total to Collection:
£

£

F10 BRICK/ BLOCK WALLING

To be read with Preliminaries/ General conditions.

TYPES OF WALLING

110 CLAY FACING BRICKWORK

- Bricks: To BS 3921:1985. 215x102.5x65mm with a dimensional accuracy Guarantee which states that 90% of all facing bricks will have a face dimension of no more than plus or minus 3mm from 215mm when measured 10mm back, using callipers, from the face of the brick.
 - The durability designation of the bricks is to be FL
 - The minimum compressive strength of the bricks is to be $\geq 40\text{N/mm}^2$.
 - The maximum water absorption of the bricks is to be $\leq 10\%$ by weight.
 - The initial rate of suction for the bricks is $0.3\text{kg/m}^2/\text{min}$
 - Manufacturer: Contractors choice or Ibstock Brick Limited
Leicester Road, Ibstock,
Leicestershire
LE67 6HS
- Product reference: Bexhill Dark or Red facing brickwork to closely match existing.
 - Mortar: cement lime mortar to match existing.
 - Bond: Unless otherwise noted and/or drawn – Half lap stretcher.
 - Joints: 10mm Bucket Handle.

355 CONCRETE COMMON BLOCKWORK: Internal Party Wall

- Blocks: Solid blocks to BS 6073: Part 1.
- Manufacturer and reference: Contractor's preferred or Besblock Insulite Range or equivalent.
- Compressive strength: 7 N/sq mm
- Thermal properties: Not less than 0.19 sq m degC/W at 3% moisture content.
- Work sizes (length x width x height): 440 x 215 x 140mm.
- Mortar: As section Z21.
 - Mix: sand:cement 3:1
 - Bond: stretcher.

WORKMANSHIP GENERALLY

440 CONDITIONING OF CONCRETE BRICKS/ BLOCKS

- Autoclaved concrete bricks/ blocks delivered warm from manufacturing process: Do not use.
- Age of nonautoclaved concrete bricks/ blocks: Do not use until at least four weeks old.
- Avoidance of suction in concrete bricks/ blocks: Do not wet.
 - Use of water retaining mortar admixture: Submit details.



460 MORTAR GROUPS

- Mix proportions: For a specified group select a mix design from the following:
- Group 1:
 - 1:0–0.25:3 (Portland cement:lime:sand with or without air entraining additive).
 - 1:3 (Portland cement:sand and air entraining additive).
- Group 2:
 - 1:0.5:4–5 (Portland cement:lime:sand with or without air entraining additive).
 - 1:3 (masonry cement:sand containing Portland cement and lime in approximate ratio 1:1, and an air entraining additive).
 - 1:2.5–3.5 (masonry cement:sand containing Portland cement and inorganic materials other than lime and air entraining additive).
 - 1:3–4 (Portland cement:sand and air entraining additive.)
- Group 3:
 - 1:1.5–6 (Portland cement:lime:sand with or without air entraining additive).
 - 1:3.5–4 (masonry cement:sand containing Portland cement and lime in approximate ratio 1:1, and an air entraining additive).
 - 1:4–5 (masonry cement:sand containing Portland cement and inorganic materials other than lime and air entraining additive).
 - 1:5–6 (Portland cement:sand and air entraining additive).
- Group 4:
 - 1:2.8–9 (Portland cement:lime:sand with or without air entraining additive).
 - 1:4.5 (masonry cement:sand containing Portland cement and lime in approximate ratio 1:1, and an air entraining additive).
 - 1:5.5–6.5 (masonry cement:sand containing Portland cement and inorganic materials other than lime and air entraining additive).
 - 1:7–8 (Portland cement:sand and air entraining additive).
 - Batching: Mix proportions by volume.
 - Mortar type: Continuous throughout any one type of masonry work.

500 LAYING GENERALLY

- Mortar joints: Fill vertical joints. Lay bricks, solid and cellular blocks on a full bed.
- AAC block thin mortar adhesive and gypsum block adhesive joints: Fill vertical joints. Lay blocks on a full bed.
 - Clay block joints:
 - Thin layer mortar: Lay blocks on a full bed.
 - Interlocking perpend: Butted.
 - Bond where not specified: Half lap stretcher.
 - Vertical joints in brick and concrete block facework: Even widths. Plumb at every fifth cross joint.

520 ACCURACY

- Courses: Level and true to line.
- Faces, angles and features: Plumb.

Total to Collection:
£

£



- Permissible deviations:
 - Position in plan of any point in relation to the specified building reference line and/ or point at the same level ± 10 mm.
 - Straightness in any 5 m length ± 5 mm.
 - Verticality up to 3 m height ± 10 mm.
 - Verticality up to 7 m height ± 14 mm.
 - Overall thickness of walls ± 10 mm.
 - Level of bed joints up to 5 m (brick masonry) ± 11 mm.
 - Level of bed joints up to 5 m (block masonry) ± 13 mm.

595 LINTELS

- Bearing: Ensure full length masonry units occur immediately under lintel ends.

610 SUPPORT OF EXISTING WORK

- Joint above inserted lintel or masonry: Fully consolidated with semidry mortar to support existing structure.

620 BLOCK BONDING NEW WALLS TO EXISTING

- Pocket requirements: Formed as follows:
 - Width: Full thickness of new wall.
 - Depth (minimum): 100 mm.
 - Vertical spacing:
 - Brick to brick: 4 courses high at 8 course centres.
 - Block to block: Every other course.
- Pocket joints: Fully filled with mortar.

635 JOINTING

- Profile: Consistent in appearance.

645 ACCESSIBLE JOINTS NOT EXPOSED TO VIEW

- Jointing: Struck flush as work proceeds.

665 POINTING

- Joint preparation: Remove debris. Dampen surface.
- Mortar: As section Z21.

671 FIRE STOPPING

- Avoidance of fire and smoked penetration: Fit tightly between cavity barriers and masonry. Leave no gaps.

690 ADVERSE WEATHER

- General: Do not use frozen materials or lay on frozen surfaces.
- Air temperature requirements: Do not lay bricks/ blocks:

Total to Collection:
£

£



- In cement gauged mortars when at or below 3°C and falling or unless it is at least 1°C and rising.
- In hydraulic lime:sand mortars when at or below 5°C and falling or below 3°C and rising.
- In thin joint mortar glue when outside the limits set by the mortar manufacturer.
- Temperature of walling during curing: Above freezing until hardened.
- Newly erected walling: Protect at all times from:
 - Rain and snow.
 - Drying out too rapidly in hot conditions and in drying winds.

ADDITIONAL REQUIREMENTS FOR FACEWORK

710 THE TERM FACEWORK

- Definition: Applicable in this specification to brick/ block walling finished fair.
- Painted facework: The only requirement to be waived is that relating to colour.

730 BRICK/ CONCRETE BLOCK SAMPLES

- General: Before placing orders with suppliers submit for approval of appearance labelled samples of the following: facing brickwork.
- Selection of samples: Representative of the range in variation of appearance.

740 FINISHED MASONRY WORK REFERENCE PANELS

- General: Before proceeding to construct the following walling types, construct panels as specified. Give notice when panels are dry.
- Panel types:
 - Walling type: facing brickwork.
 - Location: new external door openings.
 - Size: 1 sq m.

745 MASONRY SAMPLE PANELS

- Sampling frequency: A panel for each type and delivery of masonry unit.
- Panel types: As clause 740.

750 COLOUR CONSISTENCY OF MASONRY UNITS

- Colour range: Submit proposals of methods taken to ensure that units are of consistent and even appearance within deliveries.
- Conformity: Check each delivery for consistency of appearance with previous deliveries and with approved reference panels; do not use if variation is excessive.
- Finished work: Free from patches, horizontal stripes and racking back marks.

760 APPEARANCE

- Brick/ block selection: Do not use units with damaged faces or arrises.
- Cut masonry units: Where cut faces or edges are exposed cut with table masonry saw.
- Quality control: Lay masonry units to match relevant reference panels.

Total to Collection:
£

£



- Setting out: To produce satisfactory junctions and joints with built-in elements and components.
- Coursing: Evenly spaced using gauge rods.
- Lifts: Complete in one operation.
- Methods of protecting facework: Submit proposals.

780 GROUND LEVEL

- Commencement of facework: Not less than 150 mm below finished level of adjoining ground or external works level.

790 PUTLOG SCAFFOLDING

- Use: Not permitted in facework.

800 TOOTHED BOND

- New and existing facework in same plane: Bond together at every course to achieve continuity.

830 CLEANLINESS

- Facework: Keep clean.
- Mortar on facework: Allow to dry before removing with stiff bristled brush.
- Removal of marks and stains: Rubbing not permitted.

Total to Collection:
£

£



F30 ACCESSORIES/ SUNDRY ITEMS FOR BRICK/ BLOCK/ STONE WALLING

To be read with Preliminaries/ General conditions.

CAVITIES

120 CLEANLINESS

- Cavity base and faces, ties, insulation and exposed dpcs: Free from mortar and debris.

130 PERPEND JOINT WEEP HOLES

- Form: Open perpend joint.
- Locations: Through outer leaf immediately above base of cavity, at cavity trays, stepped dpcs and external openings. 75 mm above top of cavity fill at base of cavity.
- Provision: At not greater than 1000 mm centres and not less than two over each opening.

131 BED JOINT WEEP HOLES

- Form: Open 10 mm diameter hole.
- Locations: Through outer leaf immediately above base of cavity at cavity trays, stepped dpcs and external openings. 75 mm above top of cavity fill at base of cavity.
- Provision: At not greater than 1000 mm centres and not less than two over each opening.

132 PERPEND JOINT PLASTICS WEEP HOLES

- Manufacturer: contractor's preference.
- Product reference: contractor's preference.
- Locations: Through outer leaf immediately above base of cavity, at cavity trays, stepped dpcs and external openings. 75 mm above top of cavity fill at base of cavity.
- Provision: At not greater than 1000 mm centres and not less than two over each opening.

INSTALLATION OF DPCS/ CAVITY TRAYS

415 HORIZONTAL DPCS

- Placement: In continuous lengths on full even bed of fresh mortar, with 100 mm laps at joints and full laps at angles.
- Width: At least full width of leaf unless otherwise specified. Edges of dpc not covered with mortar or projecting into cavity.
- Overlying construction: Immediately cover with full even bed of mortar to receive next masonry course.
- Overall finished joint thickness: As close to normal as practicable

425 GROUND LEVEL DPCS

- Joint with damp proof membrane: Continuous and effectively sealed.



G12 ISOLATED STRUCTURAL METAL MEMBERS

To be read with Preliminaries/ General conditions.

CONTRACTOR'S DESIGN PORTION

- Design responsibility: Contractor is to allow for the design of structural steelwork in accordance with tender documents
- Design: Complete the design in accordance with the designated code of practice to satisfy specified performance criteria.

COMPLETION OF DESIGN

- Requirement: Complete the detailed design to satisfy specified performance criteria and coordinate with the detailed design of related and adjacent work.
- Structural requirements: in accordance with structural engineer's details.
- Design and production information: contractor is to provide specification information including steel sizes, connection details, supporting padstones, loadings, foundation requirements. Contractor is to also provide scale drawings with dimensions in plan and section.
- Timing of submissions: at tender award.

10 STEEL SECTIONS AND PLATE

- Section properties and dimensions: To BS 4-1, BS EN 10055, BS EN 10056 or BS EN 10210-2, as appropriate.
 - Steel: To BS EN 10025-2 or BS EN 10210-1, as appropriate.
 - Grade: As per Structural Engineers details
 - Surface condition: Free from heavy pitting and rust, burrs, sharp edges and flame cutting dross.
- Cuts and holes: Accurate and neat.
- Welding: Metal arc method to BS EN 1011-2.
 - Welded joints: Fully fused, with mechanical properties not less than those of the parent metal.
 - Site welding: Obtain approval.

20 SHOP PRIMING

- Preparation: To BS EN ISO 12944-4. Remove fins, burrs, sharp edges and weld spatter, clean out crevices
 - Surface finish: Manually cleaned to BS EN ISO 8501-1, grade St 2.
 - Prepared surfaces: Keep in a dry atmosphere and apply first coating without delay.
- Priming:
 - Primer: One coat zinc phosphate modified alkyd, minimum dry film thickness 40 micrometres.
 - Application: To BS EN ISO 12944-7.

Total to Collection:
£

£



40 INSTALLATION

- Accuracy: Members positioned true to line and level using, if necessary, steel packs of sufficient area to allow full transfer of loads to bearing surfaces.
- Fixing: Use washers under bolt heads and nuts.
- Tapered washers: Provide under bolt heads and nuts bearing on sloping surfaces. Match taper to slope angle and align correctly.

Total to Collection:
£

£



G20 CARPENTRY/ TIMBER FRAMING/ FIRST FIXING

To be read with Preliminaries/ General conditions.

02 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.

05 STRUCTURAL SOFTWOOD (Graded Direct to Strength Class) for non load bearing partitions, load bearing floor joists / roof joists

- Grading standard: To BS 4978, BS EN 14081-1, or other national equivalent and so marked.
- Timber of a target 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'.
- Strength class to BS EN 338: C24 unless stated otherwise
- Treatment: organic solvent impregnation

10 UNGRADED SOFTWOOD

- Quality of timber: Free from decay, insect attack (except pinhole borers) and with no knots wider than half the width of the section.

15 PLYWOOD

- Standard: To an approved national standard.
- Service class to BS EN 1995-1-1:
- Use class to BS EN 335:
- Nominal thickness: 18mm
- Appearance class to BS EN 635:
- Bond quality to BS EN 314-2:
- Finish: sanded

30 SELECTION AND USE OF TIMBER

- Timber members damaged, crushed or split beyond the limits permitted by their grading: Do not use.

Total to Collection:
£

£



- 32 NOTCHES, HOLES AND JOINTS IN TIMBER
- Notches and holes: Position in relation to knots or other defects such that the strength of members will not be reduced.
 - Scarf joints, finger joints and splice plates: Do not use without approval.
- 35 PROCESSING TREATED TIMBER
- Cutting and machining: Carry out as much as possible before treatment.
 - Extensively processed timber: Retreat timber sawn lengthways, thickened, planed, ploughed, etc.
 - Surfaces exposed by minor cutting/ drilling: Treat with two flood coats of a solution recommended by main treatment solution manufacturer.
- 40 MOISTURE CONTENT
- Moisture content of wood and wood based products at time of installation: Not more than:
 - Covered in generally unheated spaces: 24%.
 - Covered in generally heated spaces: 20%.
 - Internal in continuously heated spaces: 20%.
- 43 BOLTED JOINTS
- Bolt spacings (minimum): To BS EN 1995-1-1, section 8.5.
 - Holes for bolts: Located accurately and drilled to diameters as close as practical to the nominal bolt diameter and not more than 2 mm larger.
 - Washers: Placed under bolt heads and nuts that would otherwise bear directly on timber. Use spring washers in locations which will be hidden or inaccessible.
 - Bolt tightening: So that washers just bite the surface of the timber. Ensure that at least one complete thread protrudes from the nut.
 - Checking: At agreed regular intervals. Tighten as necessary.
- 45 FRAMING ANCHORS
- Manufacturer: BAT Expamet or equal approved
 - Material/ finish: Stainless Steel to BS 1449 Part 2
 - Fasteners: Galvanized or sherardized square twist nails.
 - Size: Not less than size recommended by anchor manufacturer.
 - Fixing: Secure using not less than the number of nails recommended by anchor manufacturer.
- 50 ADDITIONAL SUPPORTS
- Provision: Position and fix additional studs, noggings and/ or battens to support edges of sheet materials, and wall/ floor/ ceiling mounted appliances, fixtures, etc. shown on drawings.
 - Material properties: Timber to be of adequate size and have the same treatment as adjacent timber supports.



55 JOISTS GENERALLY

- Centres: Equal, and not exceeding designed spacing.
- Bowed joists: Installed with positive camber.
- End joists: Positioned about 50 mm from masonry walls.

60 JOISTS ON HANGERS

- Hangers: Bedded directly on and hard against supporting construction. Do not use packs or bed on mortar.
- Joists: Cut to leave not more than 6 mm gap at each end. Rebated to lie flush with underside of hangers.
- Fixing to hangers: A nail in every hole.

65 JOIST HANGERS for support of structural timbers

- Manufacturer: Expamet or equal approved
- Material/ finish: Pre galvanised mild steel
- Size: To suit joist, design load and crushing strength of supporting construction.

70 TRIMMING OPENINGS

- Trimmers and trimming joists: Not less than 25 mm wider than general joists

98 EAVES SOFFIT VENTILATION

- Soffit boards: Fixed to leave a continuous ventilation opening not less than 10 mm wide for full length of eaves.
- Insect mesh: 3–4 mm mesh screen fixed across the opening to prevent large insect entry.

99 FASCIAS/ BARGES/ SOFFITS

- Material: PVCu
- Colour: White
- Nominal depth: 200mm
- Edge profile: to match existing
 - Provide additional support at joints.
- Installer: A contractor approved by the system manufacturer.



H60 PLAIN ROOF TILING

To be read with Preliminaries/ General conditions.

03 ROOF TILING To main Dwellings

- Substrate: Timber
- Pitch: 30 degrees (TBC)
- Underlay: Klobe Permaforte or similar approved
 - Head-lap (minimum): 100 mm.
- Battens:
 - Size: 50x25mm
- Tiles: Concrete Interlocking
 - Pattern: Smooth
 - Colour: Grey
 - Size: 420x330mm
 - Head-lap (minimum): 65 mm.

20 REMOVE EXISTING TILING

- General: Carefully remove tiles, battens, underlay, etc. with minimum disturbance of adjacent retained tiling.
- Undamaged tiles: Set aside for reuse.

25 UNDERLAY

- Laying: Maintain consistent tautness.
- Vertical laps (minimum): 100 mm wide, coinciding with supports.
- Fixing: Galvanized steel, copper or aluminium 20 x 3 mm extra large clout head nails.
- Eaves: Where exposed, use an external grade (UV resistant) underlay or a proprietary eaves support product.
- Penetrations: Use proprietary underlay seals or cut underlay neatly.

30 BATTENS/ COUNTERBATTENS

- Timber: Sawn softwood.
 - Standard: In accordance with BS 5534, Annex D.
 - Moisture content at time of fixing and covering (maximum): 22%.
- Preservative treatment: As section Z12 Wood Protection Association Commodity Specification C8.

32 BATTEN FIXING

- Batten length (minimum): Sufficient to span over three supports.
- Joints in length: Butt centrally on supports. Joints must not occur more than once in any group of four battens on one support.
- Additional battens: Provide where unsupported laps in underlay occur between battens.

Total to Collection:
£

£



35 TILE FIXING

- General: Fix tiling and accessories to make the whole sound and weathertight at earliest opportunity.
- Exposed fittings and accessories: To match tile colour and finish.
- Setting out: To true lines and regular appearance. Lay tiles to a half lap bond with joints slightly open. Align tails.
- Cut tiles: Cut only where necessary, to give straight, clean edges.
- Ends of courses: Use tile and a half tiles to maintain bond and to ensure that cut tiles are as large as possible.
- Top and bottom courses: Use eaves/ tops tiles to maintain gauge.
- Perimeter tiles: Twice nail end tile in every course. Twice nail or clip two courses of tiles at eaves and top edges.
- Fixings: Nails/ clips as recommended by tile manufacturer.

37 LOCAL AND GENERAL FIXING AREAS

- Definitions:
 - Local areas: Bands of tiling around all edges or obstructions of each plane of the roof. Calculate extent of each band in accordance with BS 5534, section 5.
 - General areas: Remaining areas of roof tiling.

40 MORTAR BEDDING/ POINTING

- Mortar: As section Z21.
 - Mix: In accordance with BS 5534, 1:3 cement:sand, with plasticizing admixtures permitted.
- Weather: Do not use in wet or frosty conditions or when imminent.
- Appearance: Finish neatly and remove residue.

42 FIRE SEPARATING WALLS

- Separating wall: Completely fill space between top of wall and underside of tiles with mineral wool quilt to provide fire stopping.
- Boxed eaves: Completely seal air paths in plane of separating wall with wire reinforced mineral wool, not less than 50 mm thick, to provide fire stopping.

47 EAVES

- Ventilation components:
 - Continuous to prevent water retaining troughs.
- Gutter: Dress underlay or underlay support tray to form drip into gutter.
- Undercourse and first course tiles: Fix with tails projecting 50 mm over gutter or to centre of gutter.

52 BEDDED VERGES WITH BEDDED UNDERCLOAK

- Underlay: Carry 50 mm onto outer leaf of gable wall and bed on mortar.
- Undercloak: Matching plain tiles, sloping towards verge and projecting 38–50 mm beyond face of wall.
- Bedding: On mortar identical to that used in gable walling.

Total to Collection:
£

£



- Tiling battens: Carry onto undercloak and finish 100 mm from verge edge.
 - Verge tiles: Bed flush with undercloak on 75 mm wide bed of mortar.
- 53 **BEDDED VERGES WITH NAILED UNDERCLOAK**
- Underlay: Carry over full width of verge.
 - Undercloak: Fibre cement sheet, nail fixed, sloping towards verge and projecting 38–50 mm beyond face of verge
 - Tiling battens: Carry onto undercloak and finish 100 mm from verge edge.
 - Verge tiles: Bed flush with undercloak on 75 mm wide bed of mortar.
 - Product reference: _____ .
 - Bedding: In mortar, neatly struck back about 13 mm. Course in with roof tiling.
 - Fixing: Secure with nails.
 - Bottom hip tiles: Fill ends with mortar and tile slips finished flush.
- 66 **METAL VALLEYS**
- Underlay: Cut over tilting fillets to lap onto metal valley. Do not lay under metal.
 - Roof tiles: Cut adjacent tiles to fit neatly.
 - Bedding: On mortar on fibre cement undercloaks laid loose each side of valleys.
- 70 **SIDE ABUTMENTS**
- Underlay: Turn up not less than 100 mm at abutments.
 - Abutment tiles: Cut as necessary. Fix close to abutments.
 - Soakers: Interleave and turn down over head of abutment tiles.
- 71 **TOP EDGE ABUTMENTS**
- Underlay: Turn up not less than 100 mm at abutments.
 - Top course tiles: Fix close to abutments.
- 75 **DRY VENTILATED RIDGES**
- Underlay: Lay top courses to provide an air gap at apex.
- 76 **DRY RIDGES**
- Underlay: Lay courses over ridge. Overlap (minimum) 100 mm.
- 77 **MORTAR BEDDED AND MECHANICALLY FIXED RIDGES**
- Underlay: Lay courses over ridge. Overlap (minimum) 100 mm.
 - Ridge tiles:
 - Bedding: On mortar, continuous to edges and solid to joints.
 - Fixing: Secure all ridge tiles to ridge boards or ridge tile fixing battens with self-sealing non-ferrous fixings.
 - Gable end ridge tiles: Fill ends with mortar and slips of tiles finished flush.

H71 LEAD SHEET COVERINGS/ FLASHINGS

To be read with Preliminaries/ General conditions.

- 30 APRON FLASHINGS (as required)
- Lead:
 - Thickness: 1.75 or 1.80 mm (Code 4).
 - Dimensions:
 - Lengths: Not more than 1500 mm.
 - End to end joints: Laps not less than 100 mm.
 - Upstand not less than 75 mm.
 - Cover to abutment: Not less than 150mm
 - Fixing:
 - Top edge: Lead wedges into bed joint.
 - Bottom edge: Clips.
- 35 COVER FLASHINGS (as required)
- Lead:
 - Thickness: 1.75 or 1.80 mm (Code 4).
 - Dimensions:
 - Lengths: Not more than 1500 mm.
 - End to end joints: Laps of not less than 100 mm.
 - Cover: Overlap to upstand not less than 75 mm.
 - Fixing:
 - Top edge: Lead wedges into bed joint.
 - Bottom edge: Clips.
- 41 SOAKERS AND STEP FLASHINGS
- Lead soakers:
 - Lead:
 - Thickness: 1.25 or 1.32 mm (Code 3).
 - Dimensions:
 - Length: Slate/ tile gauge + lap + 25 mm.
 - Upstand: Not less than 75 mm.
 - Underlap: Not less than 100 mm.
 - Lead step flashings:
 - Lead:
 - Thickness: 1.75 or 1.80 mm (Code 4).
 - Dimensions:
 - End to end joints: Laps not less than 100 mm.
 - Cover: Overlap to soaker upstands of not less than 65 mm.
 - Fixing: Lead wedges at every course

Total to Collection:
£

£



52 CHIMNEY FLASHINGS

- Lead:
 - Thickness: 1.75 or 1.80 mm (Code 4).
- Front apron:
 - Dimensions:
 - Length: Width of chimney plus not less than 150 mm underlap to each side flashing.
 - Upstand: Not less than 75 mm.
 - Cover to roof: Not less than 150mm
 - Fixing: Lead wedges into bed joint.
- Back gutter:
 - Dimensions:
 - Length: Width of chimney plus not less than 100 mm overlap to each side flashing.
 - Upstand: Not less than 100 mm.
 - Gutter Sole: Not less than 150 mm.
 - Cover up roof: Not less than 225 mm.
- Back gutter cover flashing:
 - Dimensions:
 - Length: Width of chimney plus not less than 100 mm overlap to each side flashing.
 - Cover: Overlap to back gutter upstand not less than 75 mm.
- Fixing: Lead wedges into bed joint.

60 MATERIALS AND WORKMANSHIP GENERALLY

- Lead production method:
 - Rolled, to BS EN 12588.
 - Machine cast: BBA certified.
- Identification: Colour marked for thickness/ code, weight and type.
- Workmanship standard: To BS 6915 and latest editions of 'Rolled lead sheet. The complete manual' published by the Lead Sheet Association.
- Fabrication and fixing: To provide a secure, free draining and weathertight installation.
- Marking out: Do not use scribes or other sharp instruments to mark out lead without approval.
- Solder: Use only where specified.
- Finished leadwork: Fully supported, adequately fixed to resist wind uplift but also able to accommodate thermal movement without distortion or stress.
- Patination oil: Apply smear coating to all visible lead, evenly in one direction and in dry conditions.

62 LEADWELDING

- In situ leadwelding: Not permitted.

75 TIMBER FOR USE WITH LEADWORK

- Quality: Planed, free from wane, pitch pockets, decay and insect attack (ambrosia beetle excepted).



- Moisture content: Not more than 22% at time of fixing and covering. Give notice if greater than 16%.
- Preservative treatment: Organic solvent as section Z12 and Wood Protection Association Commodity Specification C8.

76 UNDERLAY

- Handling: Prevent tears and punctures.
- Laying: Butt or overlap jointed onto a dry substrate.
 - Fixing edges: With copper or stainless steel staples or clout nails.
 - Do not lay over roof edges.
 - Turn up at abutments.
- Wood core rolls: Fixed over underlay.
- Protection: Keep dry and cover with lead at the earliest opportunity.

78 FIXING LEAD SHEET

- Top edge: Secured with two rows of fixings, 25 and 50 mm from edge.
- Fixings:
 - Nails to timber substrates: Copper clout nails to BS 1202-2, or stainless steel (austenitic) clout nails to BS 1202-1.
Shank type: Annular ringed, helical threaded or serrated.
Length: Not less than 20 mm or equal to substrate thickness.
 - Screws to concrete or masonry substrates: Brass or stainless steel to BS 1210.
Diameter: Not less than 3.35 mm.
Length: Not less than 19 mm.
 - Washers and plastics plugs: Compatible with screws.

80 CLIPS

- Material:
 - Lead clips: Cut from sheets of the same thickness/ code as sheet being secured.
 - Copper clips: Cut from 0.70 mm thick sheet to BS EN 1172, temper R220 (soft) or R240 (half hard) depending on position, dipped in solder if exposed to view.
 - Stainless steel: Cut from 0.38 mm sheet to BS EN 10088, grade 1.4301(304),terne coated if exposed to view.
- Dimensions:
 - Width: 50 mm where not continuous.
 - Length: To suit detail.
 - Fixing clips: Secure each to substrate with either two screw or three nail fixings not more than 50 mm from edge of lead sheet. Use additional fixings where lead downstands exceed 75 mm.
 - Fixing lead sheet: Welt clips around edges and turn over 25 mm.

83 WEDGE FIXING INTO JOINTS/ CHASES

- Joint/ chase: Rake out to a depth of not less than 25 mm.
- Lead: Dress into joint/ chase.
 - Fixing: Lead wedges at not more than 450 mm centres, at every change of direction and with at least two for each piece of lead.

Total to Collection:
£

£



- Sealant: Contractors choice
- Application: As section Z22.

94 DRIPS WITH SPLASH LAPS

- Underlap: Dress into rebate along top edge of drip.
- Fixing: One row of nails on centre line of rebate.
- Overlap: Dress over drip and form a 40 mm splash lap.

96 DRIPS WITH SPLASH LAPS

- Underlap: Dress up full height of drip upstand.
- Fixing: Two rows of nails to lower level substrate. Seal over nails with a soldered or leadwelded dot.
- Overlap: Dress over drip and form a 75 mm splash lap.
- Fixing: Lead clips leadwelded to underlap at bay centres.

98 WELTED JOINTS

- Joint allowance: 50 mm overlap, 25 mm underlap.
- Copper or stainless steel clips: Fix to substrate at 450 mm centres.
- Overlap: Welt around underlap and clips and lightly dress down.

Total to Collection:
£

£

K10 GYPSUM BOARD DRY LININGS/ PARTITIONS/ CEILINGS

To be read with Preliminaries/ General conditions.

15 LINING ON TIMBER

- Substrate: 63 x 38mm timber framing
- Linings: Gyproc SoundBloc ACTIV air acoustic resistant plasterboard
- Fixing: In accordance with manufacturers details ref A026009
- Finishing: In accordance with manufacturers details

25 LINING ON TIMBER FRAMED CEILINGS

- Substrate: Underside of timber floor joists
- Linings: Gyproc SoundBloc ACTIV air acoustic resistant plasterboard
- Fixing: In accordance with manufacturers details
- Finishing: In accordance with manufacturers details

45 WALL LINING ON ADHESIVE

- Manufacturer: British Gypsum
- Product reference: Drywall Adhesive dabs
 - Substrate: masonry
- Adhesive method: Gypframe MF10 Channels fixed using Gyproc DriWall Adhesive dabs
- Linings: Gyproc lining

65 DRY LINING GENERALLY

- General: Use fixing, jointing, sealing and finishing materials, components and installation methods recommended by board manufacturer.
- Standard:
 - Gypsum plasterboard to BS EN 520.
 - Gypsum fibre board to BS EN 15283-2.
 - Evidence of compliance: All sheets to be CE marked. Submit Declaration of Performance (DoP).
- Cutting gypsum boards: Neatly and accurately without damaging core or tearing paper facing. Minimize cut edges.
 - Two layer boarding: Stagger joints between layers.
 - Finishing: Neatly to give flush, smooth, flat surfaces free from bowing and abrupt changes of level.

67 SKIM COAT PLASTER FINISH

- Plaster type: Skim coat of Thistle multi-finish plaster to 2mm thick..
 - 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.

Total to Collection:
£

£



- 69 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.
- 70 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 services.
 - Board edges and lining perimeters.
- 75 NEW WET LAID BASES
- Dpcs: Install under full width of partitions/ freestanding wall linings.
- 85 MINERAL WOOL INSULATION
- Fitting insulation: Closely butted joints and no gaps. Prevent slumping.
 - Electrical cables overlaid by insulation: Size accordingly.
- 87 SEALING GAPS AND AIR PATHS
- Sealing: Apply sealant to perimeter abutments and around openings as a continuous bead with no gaps.
 - Gaps between floor and underside of gypsum board: After sealing, fill with joint compound.
- 90 SEAMLESS JOINTING
- Filling and taping: Fill joints, gaps and internal angles with jointing compound and cover with continuous lengths of tape, fully bedded.
 - Finishing: Feather out jointing compound to give a flush, smooth, seamless surface.
 - Nail/ screw depressions and minor indents: Fill to give a flush surface.

GENERAL/ PREPARATION

- 325 PREPARATION OF MASONRY TO RECEIVE WALL LININGS
- General: Suitable to receive lining system. Redundant fixtures and services removed. Cutting, chasing and making good completed.
 - Holes, gaps, service penetrations, perimeter junctions and around openings: Seal.
 - Adhesive fixings: Prepare substrate to achieve effective bonding.
 - Contaminants: Remove loose material, dirt, grease, oil, paper, etc.
 - Absorption: Control by dampening, priming or applying bonding agents as necessary.



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.

INSTALLATION

435 DRY LININGS GENERALLY

- General: Use fixing, jointing, sealing and finishing materials, components and installation methods recommended by board manufacturer.
- Cutting gypsum boards: 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.

465 STAGGERED STUD PARTITIONS

- Horizontal frame members (noggins, bearers, etc.) and boards: Fix between alternate studs and not touching adjacent offset studs.

505 INSTALLING MINERAL WOOL INSULATION

- Fitting insulation: Closely butted joints and no gaps. Use fasteners to prevent slumping or displacement.
- Services:
 - Electrical cables overlaid by insulation: Sized accordingly.
 - Ceilings: Cut insulation around electrical fittings, etc.

510 SEALING GAPS AND AIR PATHS

- Location of sealant: To perimeter abutments and around openings.

Total to Collection:
£

£



- ressurized 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 gypsum board: After sealing, fill with jointing compound.

555 FIRE STOPPING AT PERIMETERS OF DRY LINING SYSTEMS

- Material: Tightly packed mineral wool or intumescent mastic/ sealant.
- Application: To perimeter abutments to provide a complete barrier to smoke and flame.

560 JOINTS BETWEEN BOARDS

- Tapered edged gypsum boards:
 - Bound edges: Lightly butted.
 - Cut/ unbound edges: 3 mm gap.
- Square edged plasterboards: 3 mm gap.
- Square edged fibre reinforced fibre 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.

580 INSULATION BACKED PLASTERBOARD

- General: Do not damage or cut away insulation to accommodate services.
- Installation at corners: Carefully cut back insulation or plasterboard as appropriate along edges of boards to give a continuous plasterboard face, with no gaps in insulation.

590 FIXING GYPSUM BOARD TO METAL FRAMING/ FURRINGS

- Partitions/ Wall linings: Fix securely and firmly at the following centres (maximum):
 - Single layer boarding: To all framing at 300 mm centres. Reduce to 200 mm centres at external angles.
 - Multi-layer boarding: Face layer at 300 mm centres, and previous layers around perimeters at 300 mm centres.
- Ceilings: 230 mm. Reduce to 150 mm at board ends and at lining perimeters.
- Position of screws from edges of boards (minimum): 10 mm.
 - Screw heads: Set in a depression. Do not break paper or gypsum core.

Total to Collection:
£

£



- 592 FIXING INSULATION BACKED PLASTERBOARD TO METAL FURRINGS
- Fixing to furrings: In addition to screw fixings apply continuous beads of adhesive sealant to furrings.
- 610 FIXING GYPSUM BOARD TO TIMBER
- Fixing to timber: Securely at the following centres (maximum):
 - Nails: 150 mm.
 - Screws to partitions/ wall linings: 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 timber supports (minimum): 6 mm.
- 620 FIXING GYPSUM BOARD WITH ADHESIVE DABS
- Setting out boards: Accurately aligned and plumb.
 - Fixing to substrates: Securely using adhesive dabs.
 - Adhesive dab spacings for each board:
 - Horizontally: One row along top edge and one continuous dab along bottom edge.
 - Vertically: One row along each edge and thereafter at intermediate spacings to suit size of board:

Thickness (mm)	Width (mm)	Dab centres (mm)
9.5	1200	400
9.5/12.5	900	450
12.5	1200	600
 - Adhesive dab dimensions (width x length): At least 50–75 mm x 250 mm.
 - Position of dabs from edges/ ends of boards (minimum): 25 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 GYPSUM BOARDS
- 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

- 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.

Total to Collection:
£

£

K11 RIGID SHEET FLOORING/ SHEATHING/ SARKING/ LININGS/ CASINGS

To be read with Preliminaries/ General conditions.

10 WOOD-BASED SHEETS GENERALLY

- Standard: To BS EN 13986.
- Evidence of compliance: All sheets to be CE marked. Submit Declaration of Performance (DoP).

67 ADDITIONAL SUPPORTS

- Additional studs, noggings/ dwangs (Scot) and battens:
 - Provision: In accordance with board manufacturer's recommendations and as follows:
 - Tongue and groove jointed rigid board areas: To all unsupported perimeter edges.
 - Butt jointed rigid board areas: To all unsupported edges.
 - Size: Not less than 50 mm wide and of adequate thickness.
 - Treatment (where required): As for adjacent timber supports.

72 BOARD MOISTURE CONTENT AND CONDITIONING

- Moisture content of boards at time of fixing: Appropriate to end use.
- Conditioning regime: Submit proposals.

75 DRYNESS OF CONCRETE/ SCREED SUBSTRATES FOR FLOATING FLOORS

- Relative humidity above substrate when tested with a hygrometer to BS 8201, Appendix A (maximum): 75%.
- Test points: All corners, around perimeter, and random points over area being tested.

78 VAPOUR CONTROL LAYER IN FLOATING FLOOR CONSTRUCTION

- Location: Immediately below floating layer.
- Installation: Joints overlapped 150 mm and sealed. Membrane turned up and sealed to top face of flooring. Excess material trimmed off neatly.

85 FIXING GENERALLY

- Timing: Building to be weathertight before fixing boards internally.
- Moisture content of timber supports (maximum): 18%.
- Fasteners: Evenly spaced in straight lines and in pairs across joints.
 - Distance from edge of board: Sufficient to prevent damage.

90 OPEN JOINTS

- Perimeter joints and joints between boards: Free from plaster, mortar droppings and other debris.
- Temporary wedges/ packings: Remove on completion of board fixing.



K20 TIMBER BOARD FLOORING/ SARKING/ LININGS/ CASINGS

To be read with Preliminaries/ General conditions.

WORKMANSHIP

310 WORKMANSHIP GENERALLY

- Protection during and after installation: Keep boards dry. Protect from dirt, stain and damage until Completion.
- Boards to be used internally: Do not install until building is watertight.
- Methods of fixing, and fasteners: As section Z20.
- Moisture content of timber supports at time of fixing boards: Not more than 18%.

320 MOISTURE CONTENT OF NEW CONCRETE/ SCREED SUBSTRATES FOR FLOATING FLOORS

- Test for moisture content:
 - Standard: To BS 8201, Annex A, using an accurately calibrated hygrometer.
 - Readings: Take in corners, along edges, and at random points over the area being tested.
 - Acceptability: Do not lay flooring until all readings show 75% relative humidity or less.

330 MOISTURE CONTENT OF TIMBER

- Conditions during and after installation: Control ambient temperature and humidity conditions to maintain moisture content at average level specified in BS EN 942, table B.1 for the relevant service condition until Completion.
- Test for moisture content: When instructed, using an approved moisture meter.

350 TREATED TIMBER

- Surfaces exposed by minor cutting and/ or drilling: Treat with two flood coats of a solution recommended by main treatment solution manufacturer.

360 ACCESS PANELS

- Size and position: Agree before fixing boards.
- Additional noggings/ dwangs, battens, etc: Provide as necessary.

370 FIXING BOARDS

- Environmental conditions: Do not fix boards when ambient temperature is at or below 0°C, or above 30°C.
- Generally: Fix boards securely to each support to give flat, true surfaces free from undulations, lipping, splits and protruding fasteners.
- Timber movement: Position boards and fixings to prevent cupping, springing, excessive opening of joints and other defects.
- Heading joints: Tightly butted, central over supports and at least two board widths apart on any one support.
- Edges: Plane off proud edges. Exposed nail heads: Neatly punch below surface

Total to Collection:
£

£



L20 DOORS/ SHUTTERS/ HATCHES

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.
- 112 TIMBER PROCUREMENT
- Timber (including timber for wood-based products): Obtain from well managed forests and/ or 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.
 - Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood based products.
 - Certification scheme: FIRAS or similar approved.
- 115 FIRE RESISTING DOORS/ DOOR ASSEMBLIES/ DOORSETS
- Door products: As defined in BS EN 12519.
 - 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/ door assembly/ doorset supplied will comply with the specified requirements for fire or smoke 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.
 - Components, assemblies or sets will be marked to the relevant product standard and/ or third party certification rating.
- 120 NON FIRE RESISTING DOORS/ DOOR ASSEMBLIES/ DOORSETS
- Provide certified evidence, in the form of a product conformity certificate or engineering assessment, that each door/ doorset/ assembly supplied will comply with the specified requirements to BS EN 14351-1. Such certification must cover door and frame materials, glass and glazing materials and their installation, essential and ancillary ironmongery, hinges and seals.
 - Components and assemblies will be marked to the relevant product standard and/ or third party certification rating.
- 150 SITE DIMENSIONS
- Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.

Total to Collection:
£

£



170 CONTROL SAMPLES

- Procedure:
 - Finalize component details.
 - Fabricate one of each of the following designated items as part of the quantity required for the project.
 - Obtain approval of appearance and quality before proceeding with manufacture of the remaining quantity.

480 HIGH PERFORMANCE GRP FACED COMPOSITE DOORS

- Masterdor Limited (or equivalent)
- Acrylic modified high quality impact resistant white PVC-U extrusion, producing a rigid multi-chamber profile to BS EN 12608 Class A profiles, manufactured in accordance with BS EN ISO 9001 and BS EN ISO 14001
- - Door leaf (Open in)
- 44mm "through" colour (TBC) external skin (fibreglass faced leaf) wood grained effect, white internal skin
- Door leaf to have white capping to full perimeter of door edge
- Door leaf style "Long twin" TBC with Faithful and Gould
- - All profiles to be fully reinforced in accordance with technical manual
- Glazing details: Factory double glazed to achieve a whole frame U-value of 1.6 W/m2k
- Doors to be "Secured by Design", compliant and to be confirmed at tender stage with copy up to date certificate
- - Glazing: 6.8mm laminated outer pane and 4.0mm "toughened" inner pane to double glazed units.
- - Glazing units to BS EN 1279 and BS6262
- - Part M compliant level threshold

EXECUTION

710 PROTECTION OF COMPONENTS

- General: Do not deliver to site components that cannot be installed immediately or placed in clean, dry, floored and covered storage.
- Stored components: Stacked on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.

730 PRIMING/ SEALING

- Wood surfaces inaccessible after installation: Primed or sealed as specified before fixing components.

740 CORROSION PROTECTION

- Surfaces to be protected: _____ .
- Protective coating: Two coats of bitumen solution to BS 6949 or an approved mastic impregnated tape.
- Timing of application: Before fixing components.

Total to Collection:
£

£



- | | | |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 750 | FIXING DOORSETS | |
| - | Timing: After associated rooms have been made weathertight and the work of wet trades is finished and dried out. | |
| 760 | BUILDING IN | |
| - | General: Not permitted unless indicated on drawings. | |
| 770 | DAMP PROOF COURSES ASSOCIATED WITH BUILT IN WOOD FRAMES | |
| - | Method of fixing: To backs of frames using galvanized clout nails. | |
| 780 | DAMP PROOF COURSES IN PREPARED OPENINGS | |
| - | Location: Correctly positioned in relation to door frames. Do not displace during fixing operations. | |
| 790 | FIXING OF WOOD FRAMES | |
| - | Spacing of fixings (frames not predrilled): Maximum 150 mm from ends of each jamb and at 600 mm maximum centres. | |
| 800 | FIXING OF LOOSE THRESHOLDS | |
| - | Spacing of fixings: Maximum 150 mm from each end and at 600 mm maximum centres. | |
| 809 | FIRE RESISTING/ SMOKE CONTROL DOORS/ DOORSETS/ ROLLER SHUTTERS/ CURTAINS | |
| - | Installation: By a firm currently registered under a third party accredited fire door installer scheme in accordance with instructions supplied with the product conformity certificate, test report or engineering assessment. | |
| 810 | FIRE RESISTING/ SMOKE CONTROL DOORS/ DOORSETS/ ROLLER SHUTTERS/ CURTAINS | |
| - | Gaps between frames and supporting construction: Filled as necessary in accordance with requirements for certification and/ or door/ doorset manufacturer's instructions. | |
| 820 | SEALANT JOINTS | |
| - | Application: As section Z22 to prepared joints. Triangular fillets finished to a flat or slightly convex profile. | |
| 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. | |

Total to Collection:
£

£



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 doors requiring > 60 minutes integrity performance: Coated with intumescent paint or paste before installation.

850 LOCATION OF HINGES

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

Total to Collection:
£

£



L30 STAIRS/ LADDERS/ WALKWAYS/ HANDRAILS/ BALUSTRADES

To be read with Preliminaries/ General conditions.

PRELIMINARY INFORMATION/ REQUIREMENTS

105 CONTRACTOR'S DESIGN PORTION

- Design responsibility: Contractor is to allow for the design of staircase in accordance with tender documents
- Design: Complete the design in accordance with the designated code of practice to satisfy specified performance criteria.

107 COMPLETION OF DESIGN

- Requirement: Complete the detailed design to satisfy specified performance criteria and coordinate with the detailed design of related and adjacent work.
- Design and production information: contractor is to provide specification information including manufacturer, treads, risers, strings, newels, guarding & handrails. Contractor is to also provide scale drawings with dimensions in plan and section.
- Timing of submissions: with tender submission.

115 TIMBER PROCUREMENT

- Timber (including timber for wood based products): Obtained from well managed forests and/ or 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.
 - Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood based products.
- Certification scheme: BWF Stair Scheme.

130 SITE DIMENSIONS

- Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.

INSTALLATION

610 MOISTURE CONTENT

- Temperature and humidity: Monitor and control internal conditions to achieve specified moisture content in wood components at time of installation.



620 PRIMING/ SEALING/ PAINTING

- Surfaces inaccessible after assembly/installation: Before fixing components, apply full protective/decorative treatment/coating system.

630 CORROSION PROTECTION OF DISSIMILAR MATERIALS

- Components/ substrates/ fasteners of dissimilar materials: Isolate using washers/ sleeves or other suitable means to separate materials to avoid corrosion and/ or staining.

640 INSTALLATION GENERALLY

- Fasteners and methods of fixing: To section Z20.
- Structural members: Do not modify, cut, notch or make holes in structural members, except as indicated on drawings.
- Temporary support: Do not use stairs, walkways or balustrades as temporary support or strutting for other work.
- Applied finishes: Substrates to be even, dry, sound and free from contaminants. Make good substrate surfaces and prepare/ prime as finish manufacturer's recommendation before application.

COMPLETION

920 DOCUMENTATION

- Contents:
 - Copies of structural design calculations/ test reports.
 - General product information.
 - Installation information.
 - Inspection and maintenance reports.
- Number of copies: 2.
 - Submission: to the contract administrator within two weeks following practical completion of the works.

L40 GENERAL GLAZING

To be read with Preliminaries/ General conditions.

10 WORKMANSHIP AND POSITIONING GENERALLY

- Glazing:
 - Generally: In accordance with BS 6262 series.
 - Integrity: Wind and watertight under all conditions. Make full allowance for deflections and other movements.
- Glass:
 - Standards: Generally to BS 952 and to the relevant parts of:
 - BS EN 572 for basic soda lime silicate glass.
 - BS EN 1096 for coated glass.
 - BS EN 12150 for thermally toughened soda lime silicate glass.
 - BS EN ISO 12543 for laminated glass.
 - Quality: Free from scratches, bubbles and other defects.
 - Dimensional tolerances: Panes/ sheets to be accurately sized.
- Material compatibility: Glass/ plastics, surround materials, sealers primers and paints/ clear finishes to be compatible. Comply with glazing/ sealant manufacturers' recommendations.

20 REMOVAL OF GLASS/ PLASTICS FOR REUSE

- Existing glass/ plastics, glazing compound, beads, etc.: Remove carefully, avoiding damage to frame, to leave clean, smooth rebates free from obstructions and debris. Clean glazing, beads and other components that are to be reused.
- Deterioration of frame/ surround: Submit report on defects revealed by removal of glazing.
 - Affected areas: Do not reglaze until instructed.

30 PREPARATION

- Surrounds, rebates, grooves and beads: Clean and prepare before installing glazing; ensure compliance with any certified installation requirements.

M10 CEMENT BASED LEVELLING/ WEARING SCREEDS

To be read with Preliminaries/ General conditions.

TYPES OF SCREED

GENERALLY/ PREPARATION

205 DESIGN LIFE OF SCREEDS

- Duration: Equal to floor covering.
- Subject to reasonable wear and tear.
- Condition of use: Subject to correct loading and traffic usage throughout duration.

210 SUITABILITY OF SUBSTRATES

- General:
 - Suitable for specified levels and flatness/ regularity of finished surfaces. Consider permissible minimum and maximum thicknesses of screeds.
 - Sound and free from significant cracks and gaps.
- Concrete strength: In accordance with BS 8204-1, Table 2.
- Cleanliness: Remove plaster, debris and dirt.
- Moisture content: To suit screed type. New concrete slabs to receive fully or partially bonded construction must be dried out by exposure to the air for minimum six weeks.

215 SURFACE HARDNESS OF SUBSTRATES TO RECEIVE POLYMER MODIFIED WEARING SCREEDS

- General: Substrates must restrain stresses that occur during setting and hardening of wearing screeds.
- Test for surface hardness: To BS EN 12504-2 using a rebound hammer with compliance values as follows:
 - Rebound hammer value (minimum):
 - Screed thickness 15 mm or less: 25.
 - Screed thickness greater than 15 mm: 30.
- Report: Submit details of areas where substrate surface hardness does not comply with these values.

220 PROPRIETARY LEVELLING/ WEARING SCREEDS

- General: Materials, mix proportions, mixing methods, minimum/ maximum thicknesses and workmanship must be in accordance with recommendations of screed manufacturer.

BATCHING/ MIXING

302 CEMENTS

- Cement types: In accordance with BS 8204-1, clause 5.1.3.



- 305 AGGREGATES
- Sand: To BS EN 13139.
 - Grading limits: In accordance with BS 8204-1, Table B.1.
 - Coarse aggregates for fine concrete levelling screeds:
 - Standard: To BS EN 12620.
 - Designation: 4/10.
 - Lightweight aggregates: In accordance with BS 8204-1, Annex A.
- 306 PROPRIETARY POLYMER MODIFIED SCREEDS
- Cement types: In accordance with BS 8204-3.
 - Sand: To BS EN 13139:
 - Aggregates: In accordance with BS 8204-3.
- 307 ADMIXTURES
- Standard: In accordance with BS 8204-1, Table 1.
 - Calcium chloride: Do not use in admixtures.
- 310 BATCHING WITH DENSE AGGREGATES
- Mix proportions: Specified by weight.
 - Batching: Select from:
 - Batch by weight.
 - Batch by volume: Permitted on the basis of previously established weight: volume relationships of the particular materials. Use accurate gauge boxes. Allow for bulking of damp sand.
- 311 BATCHING WITH LIGHTWEIGHT AGGREGATES
- Standard: In accordance with BS 8204-1, Annex A.
 - Mix proportions: Specified by volume.
 - Batching: Use accurate gauge boxes.
- 330 MIXING
- Water content: Minimum necessary to achieve full compaction, low enough to prevent excessive water being brought to surface during compaction.
 - Mixing: Mix materials thoroughly to uniform consistency. Mixes other than no-fines must be mixed in a suitable forced action mechanical mixer. Do not use a free fall drum type mixer.
 - Consistency: Use while sufficiently plastic for full compaction.
 - Ready-mixed retarded screed mortar: Use within working time and site temperatures recommended by manufacturer. Do not retemper.
- 335 IN SITU CRUSHING RESISTANCE (ISCR)
- Standards and category: In accordance with BS 8204-1, Table 4.
 - Testing of bonded and unbonded screeds: To Annex D.
 - Testing of floating levelling screeds: To Annex E.

Total to Collection:
£

£



340 ADVERSE WEATHER

- Screeds surface temperature: Maintain above 5°C for a minimum of four days after laying.
- Hot weather: Prevent premature setting or drying out.

LAYING

345 LEVEL OF SCREED SURFACES

- Permissible deviation: (allowing for thickness of coverings) 5mm

350 SCREEDING TO FALLS

- Minimum screed cover: Maintain at the lowest point.
- Falls: Gradual and consistent.

351 SCREEDING TO RAMPS

- Screed cover: tbc
- Falls: Gradual and consistent.

355 FLATNESS/ SURFACE REGULARITY OF FLOOR SCREEDS

- Standard: In accordance with BS 8204-1, Table 5.
- Test: In accordance with BS 8204-1, Annex C.
- Sudden irregularities: Not permitted.

375 COMPACTION OF SCREEDS

- General: Compact thoroughly over entire area.
- Screeds over 50 mm thick: Lay in two layers of approximately equal thickness. Roughen surface of compacted lower layer then immediately lay upper layer.

392 GENERAL REINFORCEMENT

- Steel fabric: To BS 4483.
- Installation: In accordance with BS 8204-1.

395 STRIP REINFORCEMENT

- Steel fabric: To BS 4483.
- Installation: In accordance with BS 8204-1.

405 JOINTS IN LEVELLING SCREEDS GENERALLY

- Laying screeds: Lay continuously using 'wet screeds' between strips or bays. Minimize defined joints.
- Daywork joints: Form with vertical edge.

406 BAY JOINTS IN LEVELLING SCREEDS

- Location of bay joints: Coordinate with those required for substrate slab and floor covering.

Total to Collection:
£

£



- 440 CRACK INDUCING GROOVES IN LEVELLING SCREEDS
- Groove depth: At least half the depth of screed.
 - Cutting grooves: Straight, vertical and accurately positioned. Select from the following:
 - Trowel cut as screed is laid.
 - Saw cut sufficiently early after laying to prevent random cracking.
- 460 STRIP MOVEMENT JOINTS
- Installation: Set securely into screed to exact finished level of floor. Extend joints through to substrate.
 - Secure fixing to substrate: To manufacturer's recommendation.
- 468 SEALANT MOVEMENT JOINTS WITH METAL EDGINGS
- Bedding: 1:3 cement:sand.
 - Installation: Centre over joints in substrate. Set to exact finished level of floor.
 - Sealant:
 - Preparation and application: As section Z22.
- 476 METAL SECTION MOVEMENT JOINTS
- Bedding: 1:3 cement:sand.
 - Installation: Centre over joint in substrate. Set to exact finished level of floor.

FINISHING/ CURING

- 510 FINISHING GENERALLY
- Timing: Carry out all finishing operations at optimum times in relation to setting and hardening of screed material.
 - Prohibited treatments to screed surfaces:
 - Wetting to assist surface working.
 - Sprinkling cement.
- 520 WOOD FLOATED FINISH
- Finish: Slightly coarse, even texture with no ridges or steps.
- 530 SMOOTH FLOATED FINISH
- Finish: Even texture with no ridges or steps.
- 540 TROWELLED FINISH TO LEVELLING SCREEDS
- Floating: To an even texture with no ridges or steps.
 - Trowelling: To a uniform, smooth but not polished surface, free from trowel marks and other blemishes, and suitable to receive specified flooring material.



650 CURING

- General: Prevent premature drying. Immediately after laying, protect surface from wind, draughts and strong sunlight. As soon as screed has set sufficiently, closely cover with polyethylene sheeting.
- Curing period (minimum): Keep polyethylene sheeting in position for: as per manufactures recommendations
- Drying after curing: Allow screeds to dry gradually. Do not subject screeds to artificial drying conditions that will cause cracking or other shrinkage related problems.

Total to Collection:
£

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M20 PLASTERED/ RENDERED/ ROUGHCAST COATING

To be read with Preliminaries/ General conditions.

50 GYPSUM PLASTER SKIM COAT ON PLASTERBOARD

- Plasterboard manufacturer: British Gypsum or equal approved
 - Product reference: Gyproc Sound Bloc
- Plaster: Board finish plaster to BS EN 13279-1, class B.
 - Manufacturer: British Gypsum
 - Product reference: TBC
 - Thickness: 3mm
 - Finish: Smooth.

60 CEMENTS FOR MORTARS

- Cement: To BS EN 197-1.
 - 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.
- Sulfate resisting cement: To BS EN 197-1.
- Masonry cement: To BS EN 998-1 and Kitemarked.
 - Class: MC 12.5 (with air entraining agent).

62 ADMIXTURES FOR CEMENT GAUGED MORTARS

- Air entraining (plasticizing) admixtures: To BS EN 934-2 and compatible with other mortar constituents.
- Other admixtures: Submit proposals.
- Prohibited admixtures: Calcium chloride and admixtures containing calcium chloride.

65 MIXING

- Render mortars (site-made):
 - Batching: By volume using gauge boxes or buckets.
 - Mix proportions: Based on damp sand. Adjust for dry sand.
- Mixes: Of uniform consistence and free from lumps.

67 COLD WEATHER

- Internal work: Take precautions to prevent damage to internal coatings when air temperature is below 3°C.
- External work: Avoid when air temperature is at or below 5°C and falling or below 3°C and rising.

71 SUITABILITY OF SUBSTRATES

- General: Suitable to receive coatings. Sound, free from contamination and loose areas.

Total to Collection:
£

£



- 74 EXISTING DAMP AFFECTED PLASTER/ RENDER
- Plaster affected by rising damp: Remove to a height of 300 mm above highest point reached by damp or 1 m above dpc, whichever is higher.
 - Perished and salt contaminated masonry:
 - Mortar joints: Rake out.
 - Masonry units: Submit proposals.
 - Drying out substrates: Establish drying conditions.
- 76 REMOVING DEFECTIVE EXISTING PLASTER
- Plaster for removal: Loose, hollow, soft, friable, badly cracked, affected by efflorescence or otherwise damaged.
 - Removing plaster: Cut back to a square, sound edge.
- 78 REMOVING DEFECTIVE EXISTING RENDER
- Render for removal: Detached, hollow, soft, friable, badly cracked, affected by efflorescence or otherwise damaged.
 - Removing defective render: Cut out to regular rectangular areas with straight, square cut or slightly undercut edges.
 - Render with imitation joints: Cut back to joint lines.
 - Cracks (other than hairline cracks): Cut out to a width of 75 mm (minimum).
- 80 PLASTERBOARD BACKINGS
- Additional framing supports:
 - Fixtures, fittings and service outlets: Accurately position to suit fasteners.
 - Board edges and perimeters: To suit type and performance of board.
 - Joints:
 - Joint widths (maximum): 3 mm.
 - End joints: Stagger between rows.
 - Two layer boarding: Stagger joints between layers.
 - Joint reinforcement tape: Apply to joints and angles except where coincident with metal beads.
- 87 APPLICATION OF COATINGS
- General: Apply coatings firmly and achieve good adhesion.
 - Appearance of finished surfaces: Even and consistent. Free from rippling, hollows, ridges, cracks and crazing.
 - Accuracy: Finish to a true plane with walls and reveals plumb and square.
 - Drying out: Prevent excessively rapid or localized drying out.
 - Keying undercoats: Cross scratch plaster coatings and comb render coatings. Do not penetrate undercoat.

M21 INSULATION WITH RENDERED FINISH

To be read with Preliminaries/ General conditions.

10 SURVEY OF STRUCTURAL SUBSTRATE

- Timing: Before starting work covered in this section.
- Objective: To confirm suitability for application of external wall insulation system.
- Survey report: Submit, covering:
 - A schedule of repairs and/ or additional works necessary to render the substrate suitable to receive the system.
 - A schedule of services, fixtures and fittings requiring removal to facilitate installation of the system.

15 REMEDIAL WORK

- Remedial work shown to be necessary by survey

20 EXTERNAL WALL INSULATION SYSTEM

- Structural substrate: Existing masonry
 - Preparation: as per manufacturers recommendations
- Insulation: EPS / Mineral Wool
 - Method of fixing: Adhesive bonding with mechanical fixings
 - Beads/ Trims: Provide and fix all necessary bell casts, stop beads, movement joint beads, etc. required to complete the installation.
 - Render: Silicone
 - Decorative finish: Smooth

30 GENERAL REQUIREMENTS

- Detailed design of system and associated features shown on drawings: Complete to meet requirements of this specification.
- Installation requirements:
 - Weathertight under all anticipated conditions.
 - Capable of resisting likely impact and wind loads.
- Installer: The system manufacturer or a contractor approved by the system manufacturer.
- Construction/ Movement joints: Formed as and where shown on drawings.
 - On site modifications to joint locations/ design: Agree revisions before proceeding.

40 ADVERSE WEATHER

- Adhesives/ Mortars/ Renders: Do not apply when the air temperature is:
 - at or below 5°C on a falling thermometer or below 3°C on a rising thermometer.
 - outside range recommended by manufacturer, if different from above.
- Newly rendered surfaces: Protected against adverse weather.
- Render coatings damaged by adverse weather: Replace.



50 SUBSTRATES

- Condition before application of insulation system: Structurally sound, dry, unpainted and free from contamination by dirt and dust, efflorescence, organic growths or other deleterious substances and in a suitable condition to receive specified insulation system.

60 ON SITE PULL OUT TESTS ON FIXING PINS

- Objective: To prove suitability of structural substrate and determine size and number of fixings required.
- Period of notice: 2 weeks

80 FIRE BARRIERS

- Material: Noncombustible to BS 476-4.
- Fixing: Mechanically back to structural substrate. Closely butted at joints and intersections with no gaps and incorporating intumescent materials recommended by system manufacturer.

85 SEALANT JOINTS

- Sealant: Type recommended by system manufacturer.
- Joints: Formed in accordance with system manufacturer's recommendations using any necessary joint fillers, backing strips, etc.

90 INSPECTION OF COMPLETED INSTALLATION

- Timing: As soon as possible after completion of the work and before removing scaffolding.
- Submit : Description of inspection and remedial works carried out.

Total to Collection:
£

£



M40 CERAMIC TILING

To be read with Preliminaries/ General conditions.

TYPES OF TILING

110 TILING TO BATHROOMS

- Manufacturer/ Supplier: Nicobond
- Product reference: NB1746 & NB8690
- Colour: Cream & Bumpy White
- Size: 250x200mm
- Adhesive to BS EN 12004

110 TILING TO KITCHEN

- Manufacturer/ Supplier: Nicobond
- Product reference: Metro bevelled edge
- Colour: Cream TBA
- Size: 200 x 100mm
- Adhesive to BS EN 12004

GENERAL

210 SUITABILITY OF BACKGROUNDS/ BASES

- Background/ base tolerances: To permit specified flatness/ regularity of finished surfaces given the permissible minimum and maximum thickness of bedding.
- New background drying times (minimum):
 - Concrete walls: 6 weeks.
 - Brick/ block walls: 6 weeks.
 - Rendering: 2 weeks.
 - Gypsum plaster: 4 weeks.
- New base drying times (minimum):
 - Concrete slabs: 6 weeks.
 - Cement: sand screeds: 3 weeks.

PREPARATION

310 EXISTING BACKGROUNDS/ BASES GENERALLY

- Efflorescence, laitance, dirt and other loose material: Remove.
- Deposits of oil, grease and other materials incompatible with the bedding: Remove.
- Tile, paint and other nonporous surfaces: Clean.
- Wet backgrounds: Dry before tiling.



- 330 EXISTING PLASTER
- Defective areas: Remove plaster that is loose, soft, friable, badly cracked or affected by efflorescence. Cut back to straight horizontal and vertical edges.
 - Making good: Use plaster or nonshrinking filler.
- 380 NEW PLASTER
- Plaster: Dry, solidly bedded, free from dust and friable matter.
 - Plaster primer: Apply if recommended by adhesive manufacturer.
- 390 PLASTERBOARD BACKGROUNDS
- Boards: Dry, securely fixed and rigid with no protruding fixings and face to receive decorative finish exposed.
- 400 BACKGROUNDS
- Boards: Dry, securely fixed and rigid with no protruding fixings.
 - Surfaces to be tiled: Seal or prime if recommended by adhesive manufacturer.
- 410 HACKING FOR KEY
- Keying: Roughen backgrounds thoroughly and evenly to a depth of 3 mm.
- FIXING
- 510 FIXING GENERALLY
- Colour/ shade: Unintended variations within tiles for use in each area/ room are not permitted.
 - Variegated tiles: Mix thoroughly.
 - Adhesive: Compatible with background/ base. Prime if recommended by adhesive manufacturer.
 - Use of admixtures with cementitious adhesives: Only admixtures approved by adhesive manufacturer.
 - Cut tiles: Neat and accurate.
 - Fixing: Provide adhesion over entire background/ base and tile backs.
 - Final appearance: Before bedding material sets, make adjustments necessary to give true, regular appearance to tiles and joints when viewed under final lighting conditions.
 - Surplus bedding material: Clean from joints and face of tiles without disturbing tiles.
- 530 SETTING OUT
- Joints: True to line, continuous and without steps.
 - Joints on walls: Horizontal, vertical and aligned round corners.
 - Joints in floors: Parallel to the main axis of the space or specified features.
 - Cut tiles: Minimize number, maximize size and locate unobtrusively.
 - Joints in adjoining floors and walls: Align
 - Joints in adjoining floors and skirtings: Align.



550 FLATNESS/ REGULARITY OF TILING/ MOSAICS

- Sudden irregularities: Not permitted.
- Deviation of surface: Measure from underside of a 2 m straightedge with 3 mm thick feet placed anywhere on surface. The straightedge should not be obstructed by the tiles and no gap should be greater than 6 mm, i.e. a tolerance of + 3 mm.

560 LEVEL OF TILING ACROSS JOINTS

- Deviation (maximum) between tile surfaces either side of any type of joint:
 - 1 mm for joints less than 6 mm wide.
 - 2 mm for joints 6 mm or greater in width.

570 MORTAR BEDDING

- Bedding mix:
 - Cement: Portland to BS EN 197-1, type CEM I/42.5.
 - Sand for walls: To BS EN 13139.
 - Grading designation: 0/2 (CP or MP) category 2 fines.
 - Sand for floors: To BS EN 13139.
 - Grading designation: 0/4 (MP) category 1 fines and between 20%-66% passing a 0.5 sieve.
- Batching: Select from:
 - Batch by weight.
 - Batch by volume: Permitted on the basis of previously established weight:volume relationships of the particular materials. Use accurate gauge boxes. Allow for bulking of damp sand.
- Mixing: Mix materials thoroughly to uniform consistence. Use a suitable forced action mechanical mixer. Do not use a free fall type mixer.
- Application: At normal temperatures use within two hours. Do not use after initial set. Do not retemper.

650 ADHESIVE BED - NOTCHED TROWEL METHOD (WALLS)

- Application: By 3 mm floated coat of adhesive to dry background in areas of approximately 1 m². Comb surface.
- Tiling: Press tiles firmly onto float coat.
- Paper face: Before adhesive hardens completely, remove paper face. Complete grouting. Wash off glue from face of mosaic.

MOVEMENT JOINTS/ GROUTING/ COMPLETION

815 SEALANT MOVEMENT JOINTS

- Joints: Extend through tiles and bedding to base/ background. Centre over joints in base/ background.
- Preparation and application: As section Z22.

855 CEMENT:SAND GROUTING MIX

- Grout mix: Nicobond Flexible Grout Plus (or similar approved)

Total to Collection:
£

£



- Joint widths of 6 mm or greater: To BS EN 13139, grading designation 0/2 (FP or MP), category 2 fines.
Joint widths of 3-6 mm
- Proportions (cement:sand)
- Mixing: Mix thoroughly. Use the minimum of clean water needed for workability.

875 GROUTING

- Sequence: Grout when bed/ adhesive has set sufficient to prevent disturbance of tiles.
- Joints: 6 mm deep (or depth of tile if less). Free from dust and debris.
- Grouting: Fill joints completely, tool to profile, clean off surface. Leave free from blemishes.
- Polishing: When grout is hard, polish tiling with a dry cloth.

885 COLOURED GROUT

- Staining of tiles: Not permitted
- Evaluating risk of staining: Apply grout to a few tiles in a small trial area. If discoloration occurs apply a protective sealer to tiles and repeat trial.



M50 RUBBER/ PLASTICS/ CORK/ LINO/ CARPET TILING/ SHEETING

To be read with Preliminaries/ General conditions.

TYPES OF COVERING

150 SHEETING

- Location: As indicated on tender drawings
- Base:
 - Preparation: Contractor to allow to assess the existing base and, where necessary, allow for levelling screed and/or timber sheet base – in accordance with manufacturer's recommendations.
- Flooring roll:
- Manufacturer: Gerflor
Product reference: Taralay Impression
- Colour/ pattern: Norma Beige 0519; any colour range to be permitted.
- Adhesive (and primer if recommended by manufacturer): In accordance with manufacturer's recommendations.
- Seam welding: In accordance with manufacturer's recommendations and with hot weld rods in a colour to match the vinyl.
- Accessories: Allow for all threshold and diminishing strips.
- Skirting: As section P20.

GENERAL REQUIREMENTS

210 WORKMANSHIP GENERALLY

- Base condition after preparation: Rigid, dry, sound, smooth and free from grease, dirt and other contaminants.
- Finished coverings: Accurately fitted, tightly jointed, securely bonded, smooth and free from air bubbles, rippling, adhesive marks and stains.

330 COMMENCEMENT

- Required condition of works prior to laying materials:
 - Building is weathertight and well dried out.
 - Wet trades have finished work.
 - Paintwork is finished and dry.
 - Conflicting overhead work is complete.
 - Floor service outlets, duct covers and other fixtures around which materials are to be cut are fixed.
 - Notification: Submit not less than 48 hours before commencing laying.



340 CONDITIONING

- Prior to laying: Condition materials by unpacking and separating in spaces where they are to be laid. Maintain resilient flooring rolls in an upright position. Unroll carpet and keep flat on a supporting surface.
- Conditioning time and temperature (minimum): As recommended by manufacturer with time extended by a factor of two for materials stored or transported at a temperature of less than 10°C immediately prior to laying.

350 ENVIRONMENT

- Temperature and humidity: Before, during and after laying, maintain approximately at levels which will prevail after building is occupied.
- Ventilation: Before during and after laying, maintain adequate provision.

360 FLOORS WITH UNDERFLOOR HEATING

- Commencement of laying: Not before a period of 48 hours after heating has been turned off.
- Post laying start up of heating system: Slowly return heating to its operative temperature not less than 48 hours after completing laying.

PREPARING BASES

410 NEW BASES

- Suitability of bases and conditions within any area: Commencement of laying of coverings will be taken as acceptance of suitability.

420 EXISTING BASES

- Notification: Before commencing work, confirm that existing bases will, after preparation, be suitable to receive coverings.
- Suitability of bases and conditions within any area: Commencement of laying of coverings will be taken as acceptance of suitability.

430 NEW WET LAID BASES

- Base drying aids: Not used for at least four days prior to moisture content testing.
- Base moisture content test: Carry out in accordance with BS 5325, Annexe A or BS 8203, Annexe A.
 - Locations for readings: In all corners, along edges, and at various points over area being tested.
- Commencement of laying coverings: Not until all readings show 75% relative humidity or less.

440 SUBSTRATES TO RECEIVE THIN COVERINGS

- Trowelled finishes: Uniform, smooth surface free from trowel marks and other blemishes. Abrade suitably to receive specified floor covering material.

470 BASES FROM WHICH EXISTING FLOOR COVERINGS HAVE BEEN REMOVED

- Substrate: Clear of covering and as much adhesive as possible. Skim with smoothing underlayment compound to give smooth, even surface.

Total to Collection:
£

£



510 WOOD BLOCK FLOORING

- Substrate: Clean and free from wax with all blocks sound and securely bonded. Fill hollows with smoothing underlayment compound to give smooth, even surface.
- Missing and loose blocks: Replace and reset in adhesive to match existing. Sand or plane to make level.

520 TIMBER BOARDING/ STRIP FLOORING

- Substrate: Boards/ strips securely fixed and acceptably level with no protruding fasteners. Plane, sand or apply smoothing underlayment compound to give a smooth, even surface.

530 PARTICLEBOARD FLOORING

- Substrate: Boards securely fixed, level and free from surface sealers and contaminants.
 - Gaps between boards: Not more than 1 mm.
 - Priming: As required by covering adhesive manufacturer.
- Equilibrium moisture content at time of laying covering: As in service conditions.

LAYING COVERINGS

610 SETTING OUT TILES

- Method: Set out from centre of area/ room so that, wherever possible:
 - Tiles along opposite edges are of equal size.
 - Edge tiles are more than 50% of full tile width.

640 ADHESIVE FIXING GENERALLY

- Adhesive type: As specified, as recommended by covering/ underlay manufacturer or as approved.
- Primer: Type and usage as recommended by adhesive manufacturer.
- Application: As necessary to achieve good bond.
- Finished surface: Free from trowel ridges, high spots caused by particles on the substrate, and other irregularities.

720 DOORWAYS

- Joint location: On centre line of door leaf.

COMPLETION

820 FINISHING

- Cleaning operations for sheet flooring:
 - Wash floor with water containing neutral (pH 6–9) detergent. If necessary, lightly scrub heavily soiled areas.
 - Rinse with clean water, removing surplus to prevent damage to adhesive. Allow to dry.
- Emulsion polish: Two coats of a type recommended by covering manufacturer.



830 FINISHING RUBBER FLOORING

- Cleaning operations:
 - Wash floor with a cleaner recommended by covering manufacturer.
 - Wet vacuum or mop up residue.
 - Rinse with clean water. Wet vacuum or mop up and allow to dry.
- Final treatment: Follow recommendations of covering manufacturer and spray buff with wetting agent or dry burnish.

880 WASTE

- Spare covering material: Retain suitable material for patching. On completion submit pieces for selection. Hand over selected pieces to Employer.

Total to Collection:
£

£



M51 EDGE FIXED CARPETING

To be read with Preliminaries/ General conditions.

TYPES OF CARPETING

110 CARPETING

- Location: Please refer to tender drawings
- Base:
 - Preparation: Contractor to allow to assess the existing base and, where necessary, allow for levelling screed and/or timber sheet base – in accordance with manufacturer's recommendations.
- Underlay to BS 5808 and BS EN 14499:
- Carpet:
- Additional performance properties to BS EN 1307: TBC.
 - Colour/ pattern: TBC.

150 CARPETING FOR STAIRS

- Base: Contractor to allow to assess the existing base and, where necessary, allow for timber sheet base – in accordance with manufacturer's recommendations.
- Method of fixing: carpet grippers.

160 FLOOR FINISH MATERIALS SPECIFICATION

- Minimum BRE 'Green Guide to Specification Online' rating: N/A.

GENERAL/ PREPARATION

210 WORKMANSHIP GENERALLY

- Finished carpeting: Tightly seamed, accurately fitted, neatly and securely fixed, smooth and evenly tensioned.

220 SAMPLES

- Carpet samples: Before placing orders, submit representative sample of carpet.
 - Size (minimum): 1 sq m.

230 CONTROL SAMPLES

- General: Complete areas of finished work in approved locations as follows, and obtain approval of appearance before proceeding: all areas.

250 CARPET LAYOUT – PRE-ORDER REQUIREMENTS

- Setting out: Agree seam locations and pattern.

251 CARPET LAYOUT

- Setting out: Keep seams and cross seams to a minimum.

Total to Collection:
£

£



- Cross seams: Not permitted in following locations: all areas.
- 270 EXTRA MATERIAL
 - Provision of extra material: At completion hand to Employer.
 - Quantity: N/A.
- 290 CONDITIONING CARPET
 - Requirements: As recommended by manufacturer.
- 310 CONDITION OF WORKS PRIOR TO LAYING
 - General requirements:
 - Building weathertight and well dried out.
 - Wet trades complete.
 - Paintwork complete and dry.
 - Floor service outlets, duct covers and other fixtures around which carpet is to be cut, fixed.
- 315 NOTIFICATION OF COMMENCEMENT
 - Give notice: Before laying is due to start.
 - Period of notice (minimum): 1 week.
- 320 ENVIRONMENT
 - Temperature and humidity: Before, during and after laying, maintain approximately at levels which will prevail after building is occupied.
- 330 SUITABILITY OF BASES
 - General: Commencement of laying carpeting will be taken as acceptance of suitability of bases.
- 340 NEW WET LAID BASES
 - Base drying aids: Not used for at least four days prior to moisture content testing.
 - Base moisture content test: Carry out in accordance with BS 5325, Annexe A.
 - Locations for readings: In all corners, along edges, and at various points over area being tested.
 - Commencement of laying carpeting: Not until all readings show 75% relative humidity or less.
- 350 TIMBER BOARDING/ STRIP FLOORING
 - Substrate: Boards securely fixed and acceptably level with no protruding fasteners. Plane, sand or apply smoothing underlayment compound as necessary to give smooth, even surface.
- 360 EXISTING FLOOR COVERINGS TO BE OVERLAID
 - Substrate: Make good by local rebedding, sanding or applying smoothing underlayment compound to give a secure, smooth, even surface. Allow to dry before laying carpeting.

Total to Collection:
£

£

LAYING CARPETING

410 CARPET GRIPPER

- Manufacturer: TBC.
- Product reference: TBC.
- Types and method of fixing: As recommended by gripper manufacturer to suit specified carpet, base and conditions of use.
- Fixing: Secure to form continuous length along all edges adjacent to vertical surfaces leaving a 'gully width' of approximately three quarters the thickness of carpet. Do not place across openings.
- Adhesive fixed gripper strip unit length (maximum): 200 mm.

420 INTERLAY

- Placement: Fully cover base, with no wrinkles, folds, overlapping or gaps (other than to allow for expansion). Lay at right angles to direction of boarded floors.

430 UNDERLAY ON FLOORS

- Setting out: Seams not to coincide with those in carpet.
- Placement: Cut to size, butted to grippers and secured at perimeter by stapling or adhering to base.
- Surface of installed underlay: Flat, smooth and free from wrinkles or bubbles.
- Seams: Butt joints secured with staples, adhesive or top-taped with no shadow shown through carpet.

440 UNDERLAY ON STAIRS

- Extent: Underlay pads to cover tread and riser in one piece to full width of carpet (except where edges will be exposed).
- Placement: Butted to grippers and secured to prevent movement and wrinkling.

450 CARPET SEAMS/ JOINTS

- General: Straight, flat, evenly tensioned and butted, with no surface pile trapped between edges.
- Method and materials: Compatible with carpet and as recommended by manufacturers.
- Bond strength: Consistent for full length of seam, sufficient to withstand stretching without opening up and to last the life of carpet.
- Pattern matching (where applicable): Accurately matched for full length of seam.

460 RAW EDGE SEAMS (INCLUDING CROSS SEAMS)

- Treatment prior to seaming: Strengthen with cross straps and make secure by sealing, whipping or binding.

470 LAYING CARPET GENERALLY

- Appearance of laid carpet: Pieces of the same carpet type capable of being seen together to be of consistent appearance with pile lying in the same direction.



- Carpet perimeter: Accurately and closely fitted leaving no gaps. Edges turned down and secured to grippers.
 - Carpet tension: Even, and such that carpet lies flat and will not ruck, ripple or become slack.
 - Doorways and recesses: Cut carpet in. Do not piece-in without prior approval.
- 480 POWER STRETCHING
- General: Power stretch carpets greater than 5 metres in any dimension.
- 490 DOORWAYS
- Carpet joint: On centre line of door leaf.
- 510 EDGINGS AND COVER STRIPS
- Fixing: Secure with edge of carpet firmly gripped. Use matching fasteners where exposed to view.
- 530 LAYING STAIR CARPET WITH GRIPPER
- Shifting allowance: Provide a minimum additional length of carpet equivalent to one tread and riser. Conceal by substituting for underlay at top or bottom of stairs.
 - Gripper locations:
 - One on each tread and each riser, close to intersection.
 - To edge of each winder over 300 mm deep and abutting a wall.
 - Along a landing over 300 mm deep and abutting a wall.
 - Pile direction: Towards bottom of stairs and perpendicular to nosings.
- 540 LAYING STAIR CARPET WITH ADHESIVE
- Placement: Fit carpet after fixing nosings. Bond to base with a suitable permanent bond adhesive. Achieve a smooth flat finish with no trapped air.
- 550 STAIR NOSINGS AND TRIMS
- Fixing: Secure, level and, where required, with mitred joints. Adjusted to suit thickness of carpet with continuous packing strips of hardboard or plywood. Nosings and packing strips bedded in gap filling adhesive recommended by the manufacturer.
- 570 COMPLETION
- Debris: Remove stay tacks and cut away partly loose warp and face yarns.
 - Surface irregularities and tension: Check and make necessary tension adjustments.
- 580 WASTE
- Spare covering material: Retain suitable material for patching. On completion submit pieces for selection. Hand over selected pieces to Employer.

Total to Collection:
£

£



M60 PAINTING/ CLEAR FINISHING

To be read with Preliminaries/ General conditions.

10 EMULSION PAINT TO WALL SURFACES

- Manufacturer: Crown.
- Product reference: Matt Emulsion.
- Surfaces: All plastered wall surfaces including ceilings.
- Colour: Colour to be confirmed; any colour range to be permitted.
- Preparation: As per the manufacturer's recommendations.
- Number of coats: 3no coats or as required to prevent grinning.

12 GLOSS PAINT TO ALL TIMBER SKIRTING, PAINT GRADE DOORS, WINDOW BOARDS AND WINDOWS

- Manufacturer: Crown.
- Product reference: Trade Gloss.
- Surfaces: Doors and all associated frames to the internal and external face including edges and timber skirting boards.
- Colour: Colour to be confirmed; any colour range to be permitted.
- Preparation: As per the manufacturer's recommendations.
- Number of coats: 2no coats or as required to prevent grinning.

30 PREPARATION GENERALLY

- Standard: In accordance with BS 6150.
- Risk assessment and method statement for hazardous materials: Prepare for 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, dirt, grease and oil: Remove.
- Surface irregularities: Provide smooth finish.
- Organic growths and infected coatings:
 - Remove with assistance of biocidal solution.
 - Apply residual effect biocidal solution to inhibit regrowth.
- Joints, cracks, holes and other depressions: Fill with stoppers/ fillers. Provide smooth finish.
- Dust, particles and residues from preparation: Remove and dispose of safely.
- Doors, opening windows and other moving parts:
 - Ease, if necessary, before coating.
 - Prime resulting bare areas.

Total to Collection:
£

£



32 PREVIOUSLY COATED SURFACES GENERALLY

- Preparation: In accordance with BS 6150, clause 11.5.
- Contaminated or hazardous surfaces: Give notice of:
 - Coatings suspected of containing lead.
 - Substrates suspected of containing asbestos or other hazardous materials.
 - Significant rot, corrosion or other degradation of substrates.
- Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- Removing coatings: Do not damage substrate and adjacent surfaces or adversely affect subsequent coatings.
- Loose, flaking or otherwise defective areas: Carefully remove to a firm edge.
- Alkali affected coatings: Completely remove.
- Retained coatings:
 - Thoroughly clean.
 - Gloss coated surfaces: Provide key.
- Partly removed coatings: Apply additional preparatory coats.
- Completely stripped surfaces: Prepare as for uncoated surfaces.

35 FIXTURES AND FITTINGS

- Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- Replacement: Refurbish as necessary, refit when coating is dry.

37 WOOD PREPARATION

- General: Provide smooth, even finish with lightly rounded arrises.
- Degraded or weathered surface wood: Take back surface to provide suitable substrate.
- Degraded substrate wood: Repair with sound material of same species.
- Heads of fasteners: Countersink sufficient to hold stoppers/ fillers.
- Resinous areas and knots: Apply two coats of knotting.
- Defective primer: Take back to bare wood and reprime.

39 STEEL PREPARATION

- Corrosion and loose scale: Take back to bare metal.
- Residual rust: Treat with a proprietary removal solution.
- Bare metal: Apply primer as soon as possible.

41 MASONRY AND RENDERING PREPARATION

- Loose and flaking material: Remove.

43 PLASTER PREPARATION

- Nibs, trowel marks and plaster splashes: Scrape off.

Total to Collection:
£

£



- Overtrowelled 'polished' areas: Provide suitable key.

45 PREVIOUSLY PAINTED WINDOW FRAMES

- Paint encroaching beyond glass sight line: Remove.
- Loose and defective putty: Remove.
- Putty cavities and junctions between previously painted surfaces and glass: Clean thoroughly.
- Finishing:
 - Patch prime, reputty, as necessary and allow to harden.
 - Seal and coat as soon as sufficiently hard.

61 COATING GENERALLY

- Application: In accordance with BS 6150, clause 9.
- Conditions: Maintain suitable temperature, humidity and air quality.
- Surfaces: Clean and dry at time of application.
- Thinning and intermixing: Not permitted unless recommended by manufacturer.
- Priming coats: Apply 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.

80 PUTTY GLAZING

- Setting: Allow putty to set for seven days.
 - Sealing:
 - Within a further 14 days, seal with an oil based primer.
 - Fully protect putty with coating system as soon as it is sufficiently hard.
 - Extend finishing coats on to glass up to sight line.



N11 DOMESTIC KITCHEN FITTINGS, FURNISHINGS AND EQUIPMENT

To be read with Preliminaries and General Conditions.

PRODUCTS

310 FITTED BASE UNITS

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

320 FITTED WALL UNITS

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

340 WORKTOPS

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

350 SINKS, TAPS, TRAPS AND WASTES

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

360 APPLIANCES

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

370 SHELVING

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

380 PURPOSE MADE UNITS

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

390 SEALANT

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

Total to Collection:
£

£



EXECUTION

610 MOISTURE CONTENT OF WOOD AND WOOD BASED BOARDS

- Control and monitoring:
- Method statement: Submit.

620 INSTALLATION GENERALLY

- Fixings and adhesives: As section Z20.
- Services: Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

630 INSTALLING UNITS AND WORKTOPS

- General: Well fitting, stable and secure.

640 INSTALLING APPLIANCES

- Connections: Provide to electric, gas, and hot and cold water services.

650 INSTALLING SINKS, TAPS AND WASTES

- Water supply: To BS EN 806-2 and -4.
- Taps:
 - Fixing: Secure, watertight seal with the appliance.
 - Positioning: Hot tap to left of cold tap as viewed by the user of the appliance.
- Wastes:
 - Bedding: Waterproof jointing compound.
 - Fixing: With resilient washer between appliance and backnut.

660 SEALANT BEDDING AND POINTING

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

670 INSTALLING TRIMS AND MOULDINGS

- Lengths: Un-jointed between angles or ends of runs.
- Angle joints: Mitred.

COMPLETION

910 GENERAL

- Doors and drawers: Accurately aligned, not binding. Adjusted to ensure smooth operation.
- Ironmongery: Checked, adjusted and lubricated to ensure correct functioning.

920 APPLIANCE COMMISSIONING

- Appliance operation, functions and controls: Verify.
- Documentation: Submit guarantees, instruction manuals, etc.

Total to Collection:
£

£



N13 SANITARY APPLIANCES AND FITTINGS

To be read with Preliminaries/ General conditions.

PRODUCTS

300 WCS AND CISTERNS

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

302 WCS AND FLUSHING VALVES

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

304 WASH/ DRY WCS

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

335 WASH BASINS

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

375 SHOWER UNITS

- Contractor to refer to detailed schedule of work for product selection, manufacturer's details, accessories. All to be installed in accordance with manufacturer's requirements.

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: Remove.

613 COMPATIBILITY OF COMPONENTS

- General: Each sanitary assembly must consist of functionally compatible components, preferably obtained from a single manufacturer.
- Exceptions: none.

Total to Collection:
£

£



- | | |
|-----|---------------------------------------------------------------------------------------------------------------------------------------|
| 620 | NOGGINGS AND BEARERS |
| | - Noggings, bearers, etc. to support sanitary appliances and fittings: Position accurately. Fix securely. |
| | |
| 630 | TILED BACKGROUNDS OTHER THAN SPLASHBACKS |
| | - Timing: Complete before fixing appliances. |
| | - Fixing appliances: Do not overstress tiles. |
| | |
| 650 | INSTALLING WC PANS |
| | - Floor mounted pans: Screw fix and fit cover caps over screw heads. Do not use mortar or other beddings. |
| | - Seat and cover: Stable when raised. |
| | |
| 670 | INSTALLING CISTERNS |
| | - Cistern operating components: Obtain from cistern manufacturer. |
| | - Inlet and flushing valves: Match to pressure of water supply. |
| | - Internal overflows: Into pan, to give visible warning of discharge. |
| | - External overflows: Fix pipes to falls and locate to give visible warning of discharge. Agree location where not shown on drawings. |
| | |
| 710 | INSTALLING TAPS |
| | - Fixing: Secure against twisting. |
| | - Seal with appliance: Watertight. |
| | - Positioning: Hot tap to left of cold tap as viewed by user of appliance. |
| | |
| 720 | INSTALLING WASTES AND OVERFLOWS |
| | - Bedding: Waterproof jointing compound. |
| | - Fixing: With resilient washer between appliance and backnut. |
| | |
| 755 | SEALANT BEDDING AND POINTING |
| | - Bedding: Waterproof jointing compound. |
| | - Fixing: With resilient washer between appliance and backnut. |



P20 UNFRAMED ISOLATED TRIMS/ SKIRTINGS/ SUNDRY ITEMS

To be read with Preliminaries/ General conditions.

- 10 SOFTWOOD skirting, architraves, door linings and simple sundry items
- Quality of wood and fixing: To BS 1186-3.
 - Preservative treatment: N/A
 - Fire rating: N/A
 - Profile: to match existing
 - Finished size: to match existing
 - Finish as delivered: pre primed ready for decoration
 - Fixing: mechanical
- 80 INSTALLATION GENERALLY
- Joinery workmanship: As section Z10.
 - Metal workmanship: As section Z11.
 - Methods of fixing and fasteners: As section Z20.
 - Straight runs: To be in one piece, or in long lengths with as few joints as possible.
 - Running joints: Location and method of forming to be agreed where not detailed.
 - Position and level: To be agreed where not detailed.



P30 TRENCHES, PIPEWAYS AND PITS FOR BURIED ENGINEERING SERVICES

To be read with Preliminaries/ General conditions.

10 ROUTES OF SERVICES BELOW GROUND

- Locations of new service runs: Submit proposals.
- Temporary marking: Indicate service runs with marker posts.

20 TRENCHES

- Width: As small as practicable.
- Trench sides: Vertical.
- Trench bottoms: Remove mud, rock projections, boulders and hard spots. Trim level.
- Give notice: To inspect trench for each section of the work.

30 PIPEDUCTS

- Types, colour and sizes: As recommended by the service undertaker.
- General: Lay pipes straight to line, true to gradient or level on an even, continuous bed.
- Clearance between pipe ducts where they cross (minimum): 50 mm.
- Drawlines: During laying, thread through pipeducts.
 - Material, strength and length: As specified by service undertaker.
- Protection: Protect from ingress of debris. During construction, temporarily seal all exposed ends.
- Inspection: Before backfilling, allow service undertakers to inspect installation.
- Surround material: Lay and compact to 150 mm (minimum) above pipeduct crown.
- Markers: Lay marker, 200 mm above pipeduct.

Total to Collection:
£

£



P31 HOLES, CHASES, COVERS AND SUPPORTS FOR SERVICES

To be read with Preliminaries/ General conditions.

10 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 mm².
- Walls of hollow or cellular blocks: Do not chase.
- 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.

20 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:
 - Position: Locate at top. Form by sawing down to a drilled hole.
 - Depth (maximum): 0.15 x joist depth.
 - Distance from supports: Between 0.7 and 0.2 x span.
- Holes in joists:
 - Position: 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.

30 PIPE SLEEVES

- Material: Match pipeline.
- Sleeves: Extend through full thickness of wall or floor. Position accurately.



- Clearance around service (maximum): 20 mm or diameter of service, whichever is the lesser.
- Installation: Bed solid.

Total to Collection:
£

£

Q10 KERBS/ EDGINGS/ CHANNELS/ PAVING ACCESSORIES

To be read with Preliminaries/ General conditions.

40 LAYING KERBS, EDGINGS AND CHANNELS

- Cutting: Neat and accurate and without spalling. Form neat junctions.
- Bedding and backing of units: Either of the following: Bedded on mortar laid on hardened concrete base. Bedding mortar allowed to set and units secured with a continuous haunching of concrete.
 - Bedded on fresh concrete races to BS 7533-6, secured with backing concrete cast monolithically with concrete race.
- Concrete for foundations and haunching:
 - Standard: To BS 8500-2.
 - Designated mix: Not less than GEN0 or Standard mix ST1 or better, low workability.
- Mortar bedding: 1:3 cement:sand as section Z21.
 - Bed thickness: 12-40 mm.

45 ACCURACY

- Deviations (maximum):
 - Level: ± 6 mm.
 - Horizontal and vertical alignment: 3 mm in 3 m.

50 TOOLED MORTAR JOINTS

- Jointing: Ends of units buttered with bedding mortar as laying proceeds. Joints completely filled and tooled to a neat flush profile.
 - Joint width: 6 mm.

60 SEALANT MOVEMENT JOINTS

- Joint filler: Compressible cellular rubber or plastics, built in as work proceeds, extending through haunching and foundation and positioned to support correct depth of sealant.
- Joint width: 10 mm.
- Sealant application: As section Z22.

80 REGULARITY OF PAVED SURFACES

- Maximum undulation of (non-tactile) paving surface: 3 mm.
 - Method of measurement: Under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface).
- Difference in level between adjacent units (maximum):
 - Joints flush with the surface: Twice the joint width (with 5 mm max difference in level).
 - Recessed, filled joints: 2 mm.
 - Recess depth (maximum): 5 mm.
 - Unfilled joints: 2 mm.
- Sudden irregularities: Not permitted.



Q20 GRANULAR SUB-BASES TO PAVINGS

To be read with Preliminaries/ General conditions.

10 THICKNESSES OF SUB-BASES

- Thicknesses: As specified in the relevant paving section.

30 EXCAVATION AND COMPACTION OF SUBGRADES

- Final excavation to formation level: Carry out immediately before compaction of subgrade.
- Soft spots and voids: Give notice.
- Wet conditions: Do not excavate or compact when the subgrade may be damaged or destabilized.
- Compaction: Thoroughly, by roller or other suitable means, adequate to resist subsidence or deformation of the subgrade during construction and of the completed roads/ pavings when in use. Take particular care to compact fully at intrusions, perimeters and where local excavation and backfilling has taken place.

40 SUB-BASES

- Granular material: Of a known suitability for use in sub-bases, free from ice, harmful matter and excessive dust or clay, well graded, all pieces less than 75 mm in any direction, and selected from one of the following:
 - Crushed rock (other than argillaceous rock) or quarry waste.
 - Crushed concrete, crushed brick or tile, free from plaster, timber and metal.
 - Gravel or hoggin with not more clay content than is required to bind the material together, and with no large lumps of clay.
 - Natural sand or gravel.

45 LAYING AND COMPACTING SUB-BASES

- Subgrade: Not frozen and free from loose soil, rubbish and standing water.
- Structures, membranes and buried services: Ensure stability and avoid damage.
- General: Spread and level in layers.
- Compaction:
 - Timing: As soon as possible after laying.
 - Method: By roller or other suitable means, adequate to resist subsidence or deformation of the sub-base during construction and of the completed paving when in use. Take particular care to compact fully at intrusions, perimeters and where local excavation and backfilling has taken place.

50 ACCURACY

- Permissible deviation from required levels, falls and cambers (maximum):
 - Subgrade: ± 20 mm.
 - Sub-base: ± 12 mm.

Total to Collection:
£

£



- 60
- SURFACES TO RECEIVE SAND BEDDING FOR PAVING
- Blind surface: As necessary before compaction to ensure that surface is tight and dense enough to prevent laying course sand being lost into it during construction or use.
 - Material: Sand or PFA.
- 70
- PROTECTION
- Sub-bases: As soon as practicable, cover with subsequent layers, specified elsewhere.
 - Subgrades and sub-bases: Prevent degradation by construction traffic, construction operations and inclement weather.

Total to Collection:
£

£

Q25 SLAB PAVINGS

To be read with Preliminaries/ General conditions.

11 LAYING PAVINGS

- Cutting: Cleanly and accurately, without spalling, to give neat junctions with edgings and adjoining finishes.
- Lines and levels of finished surface: Smooth and even with falls to prevent ponding.
- Bedding of units: Firm so that rocking or subsidence does not occur or develop.
- Appearance: Even and regular with even joint widths and free of mortar and sand stains.

16 LEVELS OF PAVING

- Permissible deviation from specified levels (generally): ± 6 mm.
- Regularity of paved surfaces:
 - Maximum undulations in the surface of pavings (except tactile paving surfaces) under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface): 3 mm.
 - Joints between paving units or utility access covers:
 - Joints flush with the surface: difference in level between adjacent units to be no more than twice the joint width (with a 5 mm max difference in level).
 - Recessed, filled joints: difference in level between adjacent units to be no greater than 2 mm; the recess to be no deeper than 5 mm.
 - Unfilled joints: difference in level between adjacent units to be no greater than 2 mm.
 - Sudden irregularities: Not permitted.

21 PROTECTION FROM TRAFFIC

- Mortar bedded pavings: Keep free from pedestrian traffic for 4 days and vehicular traffic for 10 days after laying.
- Access: Restrict access to paved areas to prevent damage from site traffic and plant.

31 CONCRETE FLAG PAVING

- Granular sub-base: MOT
- Thickness: 150mm
- Laying and jointing: Bound construction - on mortar, site category IV, to BS 7533-4
- Laying course: Full mortar bed, nominal thickness after compaction: 15-25 mm.
 - Mortar: As section Z21, mix 1:3 cement:sand.
- Slabs: To BS EN 1339.
 - Manufacturer: Contractor choice
 - Colour/ Finish: Buff
 - Sizes: 600x600mm
- Jointing: Mortar filled.
 - Width: 5-10 mm.
 - Mortar: As section Z21, mix: 1:4 cement:sand.

Total to Collection:
£

£



Q28 TOPSOIL AND SOIL AMELIORANTS

To be read with Preliminaries/ General conditions.

- 10 PREPARATION OF UNDISTURBED TOPSOIL
 - General: Prepare as necessary for subsequent cultivation operations.
 - Hard ground: Break up thoroughly.
 - Ground covered with turf or a thick sward: Plough or dig over to full depth of topsoil
- 20 IMPORTED TOPSOIL (to form rear grassed areas)
 - Quantity: Provide as necessary to make up any deficiency existing on site and to complete the work.
- 25 SANITIZED AND STABILIZED COMPOSTED MATERIALS CERTIFIED TO PAS 100
 - Standard: In accordance with PAS 100.
 - Type: Sanitized and stabilized compost.
 - Horticultural parameters:
 - pH (1:5 water extract): 7.0-8.7.
 - Electrical conductivity (maximum, 1:5 water extract): 200 mS/m.
 - Moisture content (m/m of fresh weight): 35-55%.
 - Organic matter (minimum): 25%.
 - Grading (air dried samples): 99% passing 25 mm screen, and 90% a 10 mm screen mesh aperture.
 - Carbon:Nitrogen ratio (maximum): 20:1.
 - Texture: Friable.
 - Objectionable odour: None.
 - Timing: Apply prior to cultivation.
- 30 SPREADING TOPSOIL
 - Standard: In accordance to BS 3882.
 - Temporary roads or surfacing: Remove before spreading topsoil.
 - Spreading: Spread when reasonably dry, maintaining crumb structure. Do not compact.
 - Layers:
 - Depth (maximum): 150 mm.
 - Gently firm each layer before spreading the next.
- 35 PLANTING INTO TOPSOIL
 - Turf:
 - Supplier: Turfgrass Growers Association (TGA) member, to TGA quality standards.
 - Seed mixture: Contractor choice

Total to Collection:
£

£



40 FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT

- Above adjoining paving or kerbs: 30 mm.
- Within the root spread of existing trees: Unchanged.
- Below dpc of adjoining buildings: Not less than 150 mm.
- Shrub areas: Higher than adjoining grass areas by 30 mm.
- Within root spread of existing trees: Unchanged.
- Adjoining soil areas. Marry in.

Total to Collection:
£

£



Q40 FENCING

To be read with Preliminaries/ General conditions.

15 PREFABRICATED WOOD PANEL FENCING

- Standard: To BS 1722-11.
- Type of infill: Waney Lap
- Height: 1800mm
- Posts: 90x90 timber
 - Setting: Concrete.
- Accessories: panel clips
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-11.

60 INSTALLATION GENERALLY

- Expertise: By an experienced fencing contractor.
- Alignment: Straight lines or smoothly flowing curves.
- Tops of posts: Following profile of the ground.
- Setting posts: Rigid, plumb and to specified depth, or greater where necessary to ensure adequate support.
- Fixings: All components securely fixed.

70 SETTING POSTS IN CONCRETE

- Standard: To BS 8500-2.
- Mix: Designated concrete not less than GEN1 or Standard prescribed concrete not less than ST2.
- Alternative mix for small quantities: 50 kg Portland cement to 150 kg fine aggregate to 250 kg 20 mm nominal maximum size coarse aggregate, medium workability.
- Admixtures: Do not use.
- Holes: Excavate neatly and with vertical sides.
- Filling: Unless specified otherwise position post/ strut and fill hole with concrete to not less than half the depth, well rammed as filling proceeds and consolidated.
- Backfilling of holes not completely filled with concrete: Excavated material, well rammed and consolidated.

85 SITE CUTTING OF WOOD

- General: Kept to a minimum.
- Below or near ground level: Cutting prohibited.
- Treatment of surfaces exposed by minor cutting and drilling: Two flood coats of solution recommended for the purpose by main treatment solution manufacturer.

R10 RAINWATER DRAINAGE SYSTEMS

To be read with Preliminaries/ General conditions

GENERAL

110 GRAVITY RAINWATER DRAINAGE SYSTEM

- Rainwater outlets: As existing
- Gutters: PVCu laid to falls as per existing locations
- Pipework: PVCu as per existing
- Below ground drainage: As existing
- Accessories: Contractors choice

SYSTEM PERFORMANCE

210 DESIGN

- Design: Complete the design of the rainwater drainage system.
- Standard:
 - To BS EN 12056-3, clauses 3–7, Annex A and National Annexes.
 - To BS EN 12056-5, clauses 3, 4, 6 and 11.
- Proposals: Submit drawings, technical information, calculations and manufacturers' literature.

221 COLLECTION AND DISTRIBUTION OF RAINWATER

- General: Complete, and without leakage or noise nuisance.

350 PVC-U GUTTERS

- Standard: To the relevant parts of BS EN 607 and BS EN 1462, Kitemark certified.
- Manufacturer: FloPlast or similar
 - Product reference: Half Round 112mm Rainwater System
- Profile: Half round
- Nominal size: 112mm
- Colour: White

360 SEALANT FOR GUTTERS

- Type: Contractors choice

420 PVC-U PIPEWORK – EXTERNAL

- Standard: To BS EN 12200-1, Kitemark certified.
- Manufacturer: FloPlast or similar
 - Product reference: Half Round 68mm Rainwater System
- Section: Circular
- Nominal size: 68mm
- Colour: white

Total to Collection:
£

£

EXECUTION

600 PREPARATION

- Work to be completed before commencing work specified in this section:
- Below ground drainage. Alternatively, make temporary arrangements for dispersal of rainwater without damage or disfigurement of the building fabric and surroundings.
- Painting of surfaces which will be concealed or inaccessible.

605 INSTALLATION GENERALLY

- Electrolytic corrosion: Avoid contact between dissimilar metals where corrosion may occur.
- Plastics and galvanized steel pipes: Do not bend.
- Allowance for thermal and building movement: Provide and maintain clearance as fixing and jointing proceeds.
 - Protection:
 - Fit purpose made temporary caps to prevent ingress of debris.
 - Fit access covers, cleaning eyes and blanking plates as the work proceeds.

610 FIXING AND JOINTING GUTTERS

- Brackets: Securely fixed.
 - Fixings: as per manufacturers details
 - Fixing centres: 1m
- Additional brackets: Where necessary to maintain support and stability, provide at joints in gutters and near angles and outlets.
- Roofing underlay: Dressed into gutter.

615 SETTING OUT EAVES GUTTERS – TO FALLS

- Setting out: To true line and even gradient to prevent ponding or backfall. Position high points of gutters as close as practical to the roof and low points not more than 50 mm below the roof.
- Outlets: Align with connections to below ground drainage.

635 FIXING PIPEWORK

- Pipework: Fix securely, plumb and/ or true to line.
- Branches and low gradient sections: Fix with uniform and adequate falls to drain efficiently.
- Externally socketed pipes and fittings: Fix with sockets facing upstream.
- Additional supports: Provide as necessary to support junctions and changes in direction.
 - Provide a loadbearing support at least at every storey level.
 - Tighten fixings as work proceeds so that every storey is self supporting.
 - Wedge joints in unsealed metal pipes to prevent rattling.
- Wall and floor penetrations: Isolate pipework from structure.
 - Pipe sleeves: As section P31.
 - Masking plates: Fix at penetrations if visible in the finished work.
- Expansion joint pipe sockets: Fix rigidly to buildings. Elsewhere, provide brackets and fixings that allow pipes to slide.



- 640 FIXING VERTICAL PIPEWORK
- Bracket fixings: as per manufacturers details
 - Distance between bracket fixing centres (maximum): 1.8m
- 650 JOINTING PIPEWORK AND GUTTERS
- General: Joint with materials and fittings that will make effective and durable connections.
 - Jointing differing pipework and gutter systems: Use adaptors intended for the purpose.
 - Cut ends of pipes and gutters: Clean and square. Remove burrs and swarf. Chamfer pipe ends before inserting into ring seal sockets.
 - Jointing or mating surfaces: Clean and, where necessary, lubricate immediately before assembly.
 - Junctions: Form with fittings intended for the purpose.
 - Jointing material: Strike off flush. Do not allow it to project into bore of pipes and fittings.
 - Surplus flux, solvent jointing materials and cement: Remove.
- 700 ACCESS FOR TESTING AND MAINTENANCE
- General: Install pipework and gutters with adequate clearance to permit testing, cleaning and maintenance, including painting where necessary.
 - Access fittings and rodding eyes: Position so that they are not obstructed.
- COMPLETION
- 900 TESTING GENERALLY
- Dates for testing: Give notice.
 - Period of notice (minimum): 3 days
 - Preparation:
 - Pipework: Complete, securely fixed, free from defects, obstruction and debris before testing.
 - Testing:
 - Supply clean water, assistance and apparatus.
 - Do not use smoke to trace leaks.
 - Records: Submit a record of tests.
- 910 GUTTER TEST
- Preparation: Temporarily block all outlets.
 - Testing: Fill gutters to overflow level and after 5 minutes closely inspect for leakage.
- 915 MAINTENANCE INSTRUCTIONS
- General: At completion, submit printed instructions recommending procedures for maintenance of the rainwater installation, including full details of recommended inspection, cleaning and repair procedures.
- 920 IMMEDIATELY BEFORE HANDOVER
- Construction rubbish, debris, swarf, temporary caps and fine dust which may enter the rainwater system: Remove. Do not sweep or flush into the rainwater system.

Total to Collection:
£

£



R11 ABOVE GROUND FOUL DRAINAGE SYSTEMS

To be read with Preliminaries/ General conditions.

GENERAL

115 ABOVE GROUND FOUL DRAINAGE SYSTEM

- Waste pipework: FloPlast Push Fit System or similar
- Discharge stack and branch pipework: 110mm FloPlast Ring Seal System or similar
- Accessories: FloPlast or similar

SYSTEM PERFORMANCE

220 COLLECTION AND DISTRIBUTION OF FOUL WATER

- General: Quick, quiet and complete, self-cleansing in normal use, without blockage, crossflow, backfall, leakage, odours, noise nuisance or risk to health.
- Pressure fluctuations in pipework (maximum): ± 38 mm water gauge.
- Water seal retained in traps (minimum): 25 mm.

365 PVC-U PIPEWORK

- Standard: To BS EN 1329-1, Kitemark certified.
 - Weather resistance, connectors to WC pans, opening dimensions of access fittings, design of swept fittings, stand off dimensions of pipe and fitting brackets and requirements for adaptors and plugs: To BS 4514.
- Manufacturer: FloPlast or similar
 - Product reference: Pushfit waste system
- Nominal sizes: 32mm, 40mm, 50mm, 110mm
- Colour: Black

375 AIR ADMITTANCE VALVES

- Standard: To BS EN 12380 or Agrément certified.
- Minimum air flow rate: To BS EN 12056-2.
- Manufacturer: FloPlast or similar
 - Product reference: AX110 Pushfit

EXECUTION

601 INSTALLATION GENERALLY

- Standard: To BS EN 12056-5.
- Components: From the same manufacturer for each type of pipework.
- Electrolytic corrosion: Avoid contact between dissimilar metals where corrosion may occur.
- Plastics and galvanized steel pipes: Do not bend.
- Allowance for thermal and building movement: Provide and maintain clearance as fixing and jointing proceeds.

Total to Collection:
£

£



- Concealed or inaccessible surfaces: Decorate before starting work specified in this section.
- Protection:
 - Purpose made temporary caps: Fit to prevent ingress of debris.
 - Access covers, cleaning eyes and blanking plates: Fit as the work proceeds.

605 PIPE ROUTES

- General: The shortest practical, with as few bends as possible.
 - Bends in wet portion of soil stacks: Not permitted.
 - Routes not shown on drawings: Submit proposals before commencing work.

610 FIXING PIPEWORK

- Pipework: Fix securely plumb and/ or true to line. Fix discharge stack pipes at or close below socket collar or coupling.
- Branches and low gradient sections: Fix with uniform and adequate falls to drain efficiently.
- Externally socketed pipes and fittings: Fix with sockets facing upstream.
- Additional supports: Provide as necessary to support junctions and changes in direction.
- Vertical pipes: Provide a load bearing support not less than every storey level. Tighten fixings as work proceeds so that every storey is self supporting.
- Wall and floor penetrations: Isolate pipework from structure, e.g. with pipe sleeves.
 - Masking plates: Fix at penetrations if visible in the finished work.
- Expansion joint sockets: Fix rigidly to the building.
- Fixings: Allow the pipe to slide.

615 FIXING VERTICAL PIPEWORK

- Bracket fixings: FloPlast or similar
- Distance between bracket fixing centres (maximum): 1.2m

630 JOINTING PIPEWORK – GENERALLY

- General: Joint with materials, fittings and techniques that will make effective and durable connections.
- Jointing differing pipework systems: With adaptors intended for the purpose.
- Cut ends of pipes: Clean and square. Remove burrs and swarf. Chamfer pipe ends before inserting into ring seal sockets.
- Jointing or mating surfaces: Clean and, where necessary, lubricate immediately before assembly.
- Junctions: Form with fittings intended for the purpose.
- Jointing material: Do not allow it to project into bore of pipes and fittings.
- Surplus flux, solvent jointing materials and cement: Remove from joints.

660 JOINTING PIPEWORK – ABS, MUPVC, PVC-C AND PVC-U

- Jointing: Pushfit ring seal

700 INSTALLING AIR ADMITTANCE VALVES

Total to Collection:
£

£



- Position: Vertical, above flood level of highest appliance served and clear of insulation materials (other than the manufacturer's insulating cover).
- Connection to discharge stack: Allow removal for rodding, e.g. ring seal.
- Roof spaces and other unheated locations: Fit manufacturer's insulating cover.

705 ACCESS FOR TESTING AND MAINTENANCE

- General: Install pipework with adequate clearance to permit testing, cleaning and maintenance, including painting where necessary.
- Access fittings and rodding eyes: Position to avoid obstruction.

COMPLETION

900 TESTING GENERALLY

- Dates for testing: Give notice.
 - Period of notice (minimum): 3 days
- Preparation:
 - Pipework: Securely fixed and free from obstruction and debris.
 - Traps: Filled with clean water.
- Testing:
 - Supply clean water, assistance and apparatus.
 - Do not use smoke to trace leaks.
- Records: Submit a record of tests.

905 PIPEWORK AIRTIGHTNESS TEST

- Preparation:
 - Open ends of pipework: Temporarily seal using plugs.
 - Test apparatus: Connect a 'U' tube water gauge and air pump to pipework via a plug or through trap of an appliance.
- Testing: Pump air into pipework until gauge registers 38 mm.
- Required performance: Pressure of 38 mm is to be maintained without loss for at least three minutes.

910 SIPHONAGE AND BACK PRESSURE TESTS

- Method:
 - WC pans: Test by flushing.
 - Other appliances: Test by filling to overflow level, then removing the plug.
- Number of tests: Test each appliance three times. Recharge traps before each test.
- Self siphonage testing: Test each appliance individually.
- Induced siphonage and back pressure testing: Test by discharging the following numbers of appliances simultaneously on each stack:

915 PREHANDOVER CHECKS

- Temporary caps: Remove.
- Permanent blanking caps, access covers, rodding eyes, floor gratings and the like: Secure complete with fixings.

Total to Collection:
£

£



R12 BELOW GROUND DRAINAGE SYSTEMS

To be read with Preliminaries/ General conditions.

CONTRACTOR'S DESIGN PORTION

- Design responsibility: Contractor is to allow for the design of underground drainage in accordance with tender documents
- Design: Complete the design in accordance with the designated code of practice to satisfy specified performance criteria.

COMPLETION OF DESIGN

- Requirement: Complete the detailed design to satisfy specified performance criteria and coordinate with the detailed design of related and adjacent work.
- Design and production information: contractor is to provide specification information including routes, levels, inverts, sizes, connection details, material requirements. Contractor is to also provide scale drawings with dimensions in plan and section.
- Timing of submissions: at tender award.

02 EXISTING DRAINS

- Setting out: Before starting work, check levels and positions of existing drains, inspection chambers and manholes against drawings. Report discrepancies.

04 IN SITU CONCRETE FOR USE IN DRAINAGE BELOW GROUND

- Standard: To BS 8500-2.

11 CLAY PIPELINES

- Pipes, bends and junctions: Vitrified clay to BS EN 295-1, with flexible joints, Kitemark certified.

14 PLASTICS PIPELINES

- Pipes, bends and junctions: PVC-U to BS EN 1401-1.

19 EXCAVATING PIPE TRENCHES

- Trench from bottom up to 300 mm above crown of pipe: With vertical sides.
 - Width: As small as practicable but not less than external diameter of pipe plus 300 mm.
- Type of subsoil: Where the type of subsoil at the level of the crown of the pipe differs from that stated for the type of pipeline, give notice.
- Timing: Excavate to formation immediately before laying beds or pipes.
- Mud, rock projections, boulders and hard spots: Remove. Replace with bedding material, well consolidated.
- Local soft spots: Harden by tamping in bedding material.

Total to Collection:
£

£



- 21 BEDDING AND JOINTING
- Laying pipes: To true line and regular gradient on even bed for full length of barrel with sockets (if any) facing up the gradient.
 - Jointing: Lubricate. Leave gaps at ends of spigots to allow for movement.
- 23 CLASS D NATURAL BED
- Trench bottom: Hand trim to accurate levels, levelling up any overdig with compacted soil.
 - Pipes: Cut holes for couplings and sockets and lay pipes resting uniformly on their barrels, adjusting to line and gradient. Do not use hard packings under pipes.
 - Backfilling: After initial testing, backfill to 150 mm above crown of pipe with a protective cushion of selected fill, free from vegetable matter, rubbish and frozen soil and material retained on a 40 mm sieve. Thoroughly hand compact in 100 mm layers.
- 25 CLASS F GRANULAR BEDDING
- Bedding: Compacted granular material.
 - Laying pipes: Scoop out locally at couplings and sockets and lay pipes digging slightly into bed and resting uniformly on their barrels. Adjust to line and gradient.
 - Backfilling: After initial testing, backfill to 150 mm above crown of pipe with a protective cushion of selected fill, free from vegetable matter, rubbish and frozen soil and material retained on a 40 mm sieve. Thoroughly hand compact in 100 mm layers.
- 27 CLASS P FULL DEPTH GRANULAR SUPPORT
- Bedding: Granular material, compacted to a thickness of 100 mm (minimum). Scoop out locally at couplings and sockets and lay pipes digging slightly into bed and resting uniformly on their barrels. Adjust to line and gradient.
 - Granular support: After initial testing, lay and compact by hand more granular material uniformly to 100 mm above crown of pipe.
- 44 BENDS AT BASE OF SOIL STACKS
- Bends: 90° nominal rest bend with a minimum radius of 200 mm to centreline of the pipe.
 - Height of invert of horizontal drain at base of stack below centreline of lowest branch pipe (minimum): 450 mm.
 - Stabilizing bends: Bed in concrete without impairing flexibility of couplings.
- 50 GULLIES
- Standards:
 - Clay: To BS EN 295-1 and Kitemark certified, or Agrément certified.
 - Plastics: To BS 4660 and Kitemark certified, or Agrément certified.
- 58 INSTALLATION OF FITTINGS
- Appearance: Square with and tightly jointed to adjacent construction as appropriate.
 - Bedding and surround of fittings, traps, etc: Concrete, 150 mm thick.
 - Permissible deviation in level of gullies: +0 to -10mm.



- 64 PLASTICS INSPECTION CHAMBERS
- Standard: To BS EN 13598-1, BS EN 13598-2 or Agrément certified.
- 69 CONVENTIONAL CHANNELS, BRANCHES AND BENCHING
- Main channel: Bedded solid in 1:3 cement:sand mortar, branches connected to main channel at or slightly above invert level, but not higher than half channel level, so that discharge flows smoothly in direction of main flow.
 - Benching: Concrete rising vertically from main channel to a height not lower than soffit of outlet pipe, then sloping upwards at 10% to walls, and with dense smooth uniform finish.
- 71 PREFORMED PLASTICS CHANNELS, BRANCHES AND BENCHING
- Sizes and integral branches: To suit each manhole.
 - Bedding: 1:3 cement:sand mortar.
 - Benching: Concrete, with 10% fall from manhole walls to component rim, and with dense smooth uniform finish.
- 84 TESTING AND INSPECTION GENERALLY
- Obstructions and debris: Remove. Check that the installation is clear before testing.
- 85 INITIAL TESTING OF PIPELINES
- Before testing:
 - Cement mortar jointing: Leave 24 h.
 - Solvent welded pipelines: Leave 1 h.
 - Method: Block open ends of pipelines to be tested and pressurise. Air test short lengths to BS EN 1610.
- 88 FINAL TESTING OF DRAINS
- Before testing:
 - Cement mortar jointing: Leave 24 h.
 - Solvent welded pipelines: Leave 1 h.
- 89 WATER TESTING OF MANHOLES AND INSPECTION CHAMBERS
- Timing: Before backfilling.
 - Standard:
 - Exfiltration: To BS EN 1610, water testing (method W).
 - Infiltration: No identifiable flow of water penetrating the chamber.
- 91 BACKFILLING TO PIPELINES GENERALLY
- Backfill from top of surround or protective cushion: Material excavated from trench, compacted in 300 mm layers. Do not use heavy compactors before there is 600 mm of material over pipes.



- 94
- BACKFILLING UNDER ROADS AND PAVINGS
- Backfill from top of specified surround or protective cushion up to formation level: Well graded gravel or hardcore passing a 75 mm sieve, well compacted in 150 mm layers.
- 97
- CLEANING
- General: Flush out the whole installation and remove silt and debris immediately before handing over.

Total to Collection:
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S90 HOT AND COLD WATER SUPPLY SYSTEMS – DOMESTIC

To be read with Preliminaries/ General conditions.

CONTRACTOR'S DESIGN PORTION

- Design responsibility: Contractor is to allow for the design of Hot and Cold Water supplies in accordance with tender documents and general Unitas SOT Ltd standard specification details.
- Design: Complete the design in accordance with the designated code of practice to satisfy specified performance criteria.

COMPLETION OF DESIGN

- Requirement: Complete the detailed design to satisfy specified performance criteria and coordinate with the detailed design of related and adjacent work.
- Design and production information: contractor is to provide specification information including routes, pipework sizes, connection details, materials and equipment requirements. Contractor is to also provide scale drawings with dimensions in plan and section.
- Timing of submissions: at tender award.

GENERAL

See Unitas Sot Ltd specification for full details

EXECUTION

70 INSTALLATION GENERALLY

- Installation: To BS EN 806-4.
- Performance: Free from leaks and the audible effects of expansion, vibration and water hammer.
- Fixing of equipment, components and accessories: Fix securely, parallel or perpendicular to the structure of the building.
- Preparation: Immediately before installing tanks and cisterns on a floor or platform, clear the surface completely of debris and projections.
- Corrosion resistance: In locations where moisture is present or may occur, provide corrosion resistant fittings/ fixings and avoid contact between dissimilar metals by use of suitable washers, gaskets, etc.

71 INSTALLING CISTERNS

- Outlet positions: Connect lowest outlets at least 30 mm above bottom of cistern.
- Access: Fix cistern with a minimum clear space of 350 mm above, or 225 mm if the cistern does not exceed 450 mm in any dimension.

72 INSTALLING WARNING/ OVERFLOW PIPES TO CISTERNS

- Difference (minimum) between normal water level and overflow level:

Total to Collection:
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- Cold water storage cisterns: The greater of 32 mm or the bore of warning pipe.
- Feed and expansion cisterns: Sufficient to allow 20% increase in the volume of water in the tank, plus 25 mm.
- Vertical distance (minimum) of water supply inlet above overflow level: Bore of warning pipe.
- Fall (minimum): 1 in 10.
- Installation: Support to prevent sagging. Terminate pipes separately in prominent positions with turned down ends. Turn down within the cistern. Terminate 50 mm below normal water level.
- Insulation: Insulate within the building where the pipe is in an uninsulated space and subject to freezing.

73 INSTALLING VENT PIPES OVER CISTERNS

- Route: Install with no restrictions or valves and rising continuously from system connection to discharge over cistern.
- Internal diameter (minimum): 20 mm.

76 UNVENTED HOT WATER STORAGE DISCHARGE PIPES

- Fall (minimum): 1 in 80.
- Discharge: Via an air break and tundish.

77 INSTALLING FLUE PIPES

- Joints and bends: Minimize number.
- Slope: Not more than 30° from the vertical.
- Joints: Install with sockets uppermost, fully supported and fixed securely with brackets supplied for the purpose. Do not locate joints within the depth of floors.
 - Seals: Seal joints in accordance with manufacturer's installation instructions, to provide a gas-tight installation.
- Expansion and contraction: Accommodate thermal movement.
- Fire safety: Locate a safe distance from combustible materials.
- Roof junction: Weatherproof. Fit terminal and flashings, collars, and the like.

79 PIPELINES INSTALLATION

- Appearance: Install pipes straight, and parallel or perpendicular to walls, floors, ceilings, and other building elements.
- Pipelines finish: Smooth, consistent bore, clean, free from defects, e.g. external scratching, toolmarks, distortion, wrinkling, and cracks.
- Concealment: Generally conceal pipelines within floor, ceiling and/ or roof voids.
- Access: Locate runs to facilitate installation of equipment, accessories and insulation and allow access for maintenance.
- Arrangement of hot and cold pipelines: Run hot pipelines above cold where routed together horizontally. Do not run cold water pipelines near to heating pipelines or through heated spaces.
- Electrical equipment: Install pipelines clear of electrical equipment. Do not run pipelines through electrical enclosures or above switch gear distribution boards or the like.
- Insulation allowance: Provide space around pipelines to fit insulation without compression.

Total to Collection:
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£



80 PIPELINES FIXING

- Fixing: Secure and neat.
- Joints, bends and offsets: Minimize.
- Pipeline support: Prevent strain, e.g. from the operation of taps or valves.
- Drains and vents: Fix pipelines to falls. Fit draining taps at low points and vents at high points.
- Thermal expansion and contraction: Allow for thermal movement of pipelines. Isolate from structure. Prevent noise or abrasion of pipelines caused by movement. Sleeve pipelines passing through walls, floors or other building elements.
- Dirt, insects or rodents: Prevent ingress.

81 INSTALLING THERMOPLASTICS PIPELINES

- Primary heating circuits
- Bends: Do not use 90° elbow fittings instead of 90° bends.
- Large radius bends: Support at maximum centres.
- 90° bends: Fix pipe clips either side of bend.
- Small radius bends: Fully support 90° bends with cold form bend fixtures.

82 SUPPORTS FOR PIPELINES

- Spacing for copper pipelines: Fix securely and true to line at the following maximum centres:
 - 15 and 22 mm pipe OD: 1200 mm horizontal, 1800 mm vertical.
 - 28 and 35 mm pipe OD: 1800 mm horizontal, 2400 mm vertical.
 - 42 and 54 mm pipe OD: 2400 mm horizontal, 3000 mm vertical.
- Spacing for thermoplastics pipelines: Fix securely and true to line at the following maximum centres:
 - Up to 16 mm pipe OD: 300 mm horizontal, 500 mm vertical.
 - 17–25 mm pipe OD: 500 mm horizontal, 800 mm vertical.
 - 26–32 mm pipe OD: 800 mm horizontal, 1000 mm vertical.
- Additional supports: Locate within 150 mm of connections, junctions and changes of direction.

83 PIPELINE SPACING

- Clearance (minimum) to face of wall-fixed pipes or pipe insulation:
 - From floor: 150 mm.
 - From ceiling: 50 mm.
 - From wall: 15 mm.
 - Between pipes: 25 mm.
 - From electrical conduit, cables, etc: 150 mm.

84 JOINTS IN PIPELINES

- Copper pipelines:
 - Preparation: Cut pipes square. Remove burrs.
 - Joints: Neat, clean and fully sealed. Install pipe ends into joint fittings to full depth.

- Bends: Do not use formed bends on exposed pipework, except for small offsets. Form changes of direction with radius fittings.
- Adaptors for connecting dissimilar materials: Purpose designed.
- Substrate and plastics pipes and fittings: Do not damage, e.g. by heat when forming soldered joints.
- Flux residue: Clean off.
- Capillary joints in plastics coated pipelines.
 - Plastics coating: Do not damage, e.g. by direct or indirect heat. Wrap completed joint (when cool) with PVC tape of matching colour, half lapped.
- Thermoplastics pipelines:
 - Standard: Fusion jointing in accordance with WIS 4-32-08.
 - Fittings and accessories for joints: Purpose designed.
 - Preparation: Cut pipes square. Remove burrs.
 - Joints: Neat, clean and fully sealed. Install pipe ends into joint fittings to full depth.
 - Compression fittings: Do not overtighten.

85 PIPELINES ENTERING BUILDINGS

- Depth: Lay pipes at least 750 mm and no more than 1350 mm below finished ground level.
- Pipelines rising into building within 750 mm of the external face of the external wall or passing through a ventilated void below floor level: Insulate from finished floor level to 600 mm beyond external face of building.
- Ends of pipeducts: Seal both ends to a depth of at least 150 mm.

86 INSTALLING INSULATION TO PIPELINES

- Standard: In accordance with BS 5970.
- Cold water pipelines: Insulate in unheated spaces. Insulate potable cold water pipelines.
- Hot water pipelines: Insulate, except for short lengths in prominent positions next to appliances.
- External supply pipelines exposed to air or less than 750 mm below finished ground level: Insulate.
- Appearance: Fix securely and neatly. Make continuous over fittings and at supports. Leave no gaps. Locate split on 'blind' side of pipeline.
- Timing: Fit insulation after testing.

87 INSTALLING INSULATION TO CISTERNS

- Standard: In accordance with BS 5970.
- General: Fix securely to sides and top of cisterns. Leave no gaps.
- Access over: Allow removal of cover with minimum disturbance to insulation.
- Underside of cistern: Insulate where exposed in unheated spaces.

88 INSTALLING VALVES

- Isolation and regulation valves: Provide on equipment and subcircuits.
- Access: Locate where valves can be readily operated and maintained and next to equipment which is to be isolated.
- Connection to pipework: Fit with joints to suit the pipe material



COMPLETION

- 90 FLUSHING AND FILLING
- Standard: To BS EN 806-4.
- 91 SYSTEM DISINFECTION
- Disinfection: To BS EN 806-4.
- 92 TESTING
- Standard: To BS EN 806-4.
 - Notice (minimum): 3 days.
 - Preparation: Secure and clean pipework and equipment. Fit cistern and tank covers.
 - Leak testing: Start boiler and run the system until all parts are at normal operating temperatures and then allow to cool to cold condition for a period of 3 h.
 - Pressure testing: At both hot and cold conditions joints, fittings and components must be free from leaks and signs of physical distress when tested for at least 1 h as follows:
 - Systems fed directly from the mains, and systems downstream of a booster pump: Apply a test pressure equal to 1.5 times the maximum pressure to which the installation or relevant part is designed to be subjected in operation.
 - Systems fed from storage: Apply a test pressure equal to the pressure produced when the storage cistern is filled to its normal maximum operating level.
 - Inaccessible or buried pipelines: Carry out hydraulic pressure test to twice the working pressure.
- 93 COMMISSIONING
- Standard: To BS EN 806-4.
 - Equipment: Check and adjust operation of equipment, controls and safety devices.
 - Outlets: Check operation of outlets for satisfactory rate of flow and temperature.
- 94 TESTING SERVICE PIPELINES
- Test method: Disconnect from the mains, fill with potable water, exclude air, and apply at least twice the working pressure for 1 h.
 - Test criterion: No leakage.
- 95 DOCUMENTATION
- Manufacturer's operating and maintenance instructions: Submit for equipment and controls.
 - System operating and maintenance instructions: Submit for the system as a whole giving optimum settings for controls.
 - Record drawings: Submit drawings showing the location of circuits and operating controls.
- 96 OPERATING TOOLS
- Tools: Supply tools for operation, maintenance and cleaning purposes.
 - Valve keys: Supply keys for valves and vents.

Total to Collection:
£

£



S91 NATURAL GAS SUPPLY SYSTEMS – DOMESTIC

To be read with Preliminaries/ General conditions.

CONTRACTOR'S DESIGN PORTION

- Design responsibility: Contractor is to allow for the design of Domestic Gas and Heating supplies in accordance with tender documents and general Unitas SOT Ltd standard specification details.
- Design: Complete the design in accordance with the designated code of practice to satisfy specified performance criteria.

COMPLETION OF DESIGN

- Requirement: Complete the detailed design to satisfy specified performance criteria and coordinate with the detailed design of related and adjacent work.
- Design and production information: contractor is to provide specification information including routes, pipework sizes, connection details, materials and equipment requirements together with drawings, technical information, calculations and manufacturer's literature. Contractor is to also provide scale drawings with dimensions in plan and section.
- Timing of submissions: at tender award.

GENERAL

See Unitas Sot Ltd specification for full details

SYSTEM PERFORMANCE

20 DESIGN

- Design: Complete the design of the gas supply system.
- Proposals: Submit drawings, technical information, calculations and manufacturers' literature.

21 PIPELINE SIZES

- Sizing: Calculate sizes of gas pipes for the equipment proposed.

PRODUCTS

30 SAFETY AND CONTROL DEVICES

- Standard: To BS EN 13611.

31 SECONDARY GAS METERS

- Gas meter: To BS EN 1359.
- Unions and adaptors: To BS 746.

Total to Collection:
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£



- 33 GAS PLUG COCKS
- Standard: To BS 1552.

- 34 GAS BALL VALVES
- Standard: To BS EN 331.

EXECUTION

- 60 INSTALLATION GENERALLY
- Domestic gas pipelines: To BS 6891.
 - Secondary gas meters: To BS 6400.

- 62 GAS SAFE REGISTRATION REQUIREMENTS
- Type of service: Domestic.
 - Type of gas: Natural gas.

COMPLETION

- 90 TESTING, COMMISSIONING AND PURGING GAS PIPELINES
- Standard: To BS 6891.

- 91 DOCUMENTATION
- Manufacturers' operating and maintenance instructions: Submit for equipment and controls.
 - Record drawings: Submit drawings showing the location of circuits and operating controls.

- 92 OPERATING TOOLS
- Tools: Supply tools for operation, maintenance and cleaning purposes.
 - Valve keys: Supply keys for valves, vents and meter housing.

Total to Collection:
£

£



T90 HEATING SYSTEMS – DOMESTIC

To be read with Preliminaries/ General conditions.

CONTRACTOR'S DESIGN PORTION

- Design responsibility: Contractor is to allow for the design of Domestic Heating system in accordance with tender documents and general Unitas SOT Ltd standard specification details.
- Design: Complete the design in accordance with the designated code of practice to satisfy specified performance criteria.

COMPLETION OF DESIGN

- Requirement: Complete the detailed design to satisfy specified performance criteria and coordinate with the detailed design of related and adjacent work.
- Design and production information: contractor is to provide specification information including routes, pipework sizes, connection details, materials and equipment requirements together with drawings, technical information, calculations and manufacturer's literature. Contractor is to also provide scale drawings with dimensions in plan and section.
- Timing of submissions: at tender award.

GENERAL

See Unitas Sot Ltd specification for full details

SYSTEM PERFORMANCE

20 DESIGN – to contractors design

- Design: Complete the design of the heating system.
- Proposals: Submit drawings, technical information, calculations and manufacturer's literature.

21 BASIC DESIGN TEMPERATURES

- Room temperatures: Design the system to provide the following temperatures for the specified air change rates and an external air temperature of -4°C:
 - Living rooms: 21°C, for 1.5 air changes per hour.
 - Dining rooms: 21°C, for 1.5 air changes per hour.
 - Bedsitting rooms: 21°C, for 1.5 air changes per hour.
 - Bedrooms: 18°C, for 1 air changes per hour.
 - Halls and landings: 18°C, for 1.5 air changes per hour.
 - Kitchens: 18°C, for 2 air changes per hour.
 - Bathrooms: 22°C, for 2 air changes per hour.
 - Toilets: 18°C, for 2 air changes per hour.
- Submittals: Submit heat loss calculations for each room using the HEVACOMP suite of programmes.

Total to Collection:
£

£



25 HEATING SYSTEM CAPACITY

- Output of total heating surface area in a space: As near as practicable to, but not less than, the design heat loss for that space.
- Boiler output (minimum): Total calculated heat loss, including emission from the system pipelines.

26 HEATING AND HOT WATER SUPPLY SYSTEM CAPACITY

- Output of total heating surface area in a space: As near as practicable to, but not less than, the design heat loss for that space.
- Boiler output (minimum): Total calculated heat loss, including emission from the system pipelines, and sufficient to meet the hot water supply requirements.

27 SYSTEM CONTROL

- Temperature and time control: Fully automatic and independent.
- Controls: Compatible with each other and with central heating boiler.

PRODUCTS

31 BOILERS, GAS FIRED COMBINATION

- Standards: To BS 5258-15, BS EN 483 or BS EN 297 and BS EN 625.
Manufacturer: Contractors choice recommended Valient Eco Plus

48 COPPER PIPELINES FOR GENERAL USE

- Standard: To BS EN 1057, Kitemark certified.
- Temper: Half hard R250.
- Wall thickness (nominal):
 - OD 6, 8, 10 and 12 mm: 0.6 mm.
 - OD 15 mm: 0.7 mm.
 - OD 22 and 28 mm: 0.9 mm.
 - OD 35 and 42 mm: 1.2 mm.
- Microbore temper: Soft coil R220.
- Microbore wall thickness (nominal):
 - OD 6 and 8 mm: 0.6 mm.
 - OD 10 mm: 0.7 mm.
- Jointing: Integral lead-free solder ring capillary fittings.
 - Standard: To BS EN 1254-1, Kitemark certified.
- Connections to appliances and equipment: Select from:
 - Compression fittings: To BS EN 1254-2, Kitemark certified.
 - Fittings with threaded ends: To BS EN 1254-4.
- Supports: _____ .

49 COPPER PIPELINES, PLASTICS COATED

Total to Collection:
£

£



- Standard: To BS EN 1057, Kitemark certified.
- Temper: Half hard R250.
- Wall thickness (nominal):
 - OD 6, 8, 10 and 12 mm: 0.6 mm.
 - OD 15 mm: 0.7 mm.
 - OD 22 and 28 mm: 0.9 mm.
 - OD 35 and 42 mm: 1.2 mm.
- Microbore temper: Soft coil R220.
- Microbore wall thickness (nominal):
 - OD 6 and 8 mm: 0.6 mm.
 - OD 10 mm: 0.7 mm.
- Jointing: Integral lead-free solder ring capillary fittings.
 - Standard: To BS EN 1254-1, Kitemark certified.
- Connections to appliances and equipment: Select from:
 - Compression fittings: To BS EN 1254-2, Kitemark certified.
 - Fittings with threaded ends: To BS EN 1254-4.

51 VENT PIPELINES

- Materials: To BS EN 1057.
- Jointing:
 - Compression: To BS EN 1254-2.
 - Capillary: To BS EN 1254-1.

52 WARNING AND OVERFLOW PIPES TO FEED AND EXPANSION CISTERNS

- Minimum OD: Greater than inlet pipe OD and at least 22 mm.
- Difference between normal water level and overflow level: Sufficient to allow 20% increase in the volume of water in the tank plus 25 mm.
- Vertical distance of water supply inlet above overflow level: Not less than the bore of the warning pipe.

53 VALVES GENERALLY

- Types: Approved for the purpose by local water supply undertaker and of appropriate pressure and temperature ratings.
- Control of valves: Fit with handwheels for isolation and lockshields for isolation and regulation of circuits or equipment.

54 MANUAL RADIATOR VALVES

- Standard: To BS 2767

56 THERMOSTATIC RADIATOR VALVES

- Standard: To BS EN 215 and capable of providing isolation.
- Lockshield valves: To BS 2767 with matching finish fitted to return side of radiator.

Total to Collection:
£

£



- 57 CIRCULATING PUMPS
- Standards: To BS EN 16297-1, -2 and BS EN 60335-2-51.
- 58 INSULATION TO PIPELINES TO CONTROL HEAT LOSS
- Thickness (minimum): To BS 5422 tables 19 and 20 and in accordance with 'TIMSA guidance for achieving compliance with Part L of the Building Regulations', table 6.1.1.
 - Fire performance: Class 0 spread of flame when tested to BS 476-7.
- 61 RADIATORS
- Standard: To BS EN 442-1, -2, -3.
- 64 PROGRAMMERS
- Standards: To BS EN 60730-1, -2-7, -2-10, -2-14 and BS EN 61058-1, -2-5. BEAB approved.
- 65 THERMOSTATS
- Standards: To BS EN 60730-1, -2-7, -2-8, -2-9, -2-14 and BS EN 61058-1, -2-5. BEAB approved.
- 66 TIMERS
- Standards: To BS EN 60730-1, -2-7, -2-10, -2-14 and BS EN 61058-1, -2-5. BEAB approved.

EXECUTION

- 72 STRIPPING OUT
- Extent of stripping out: All existing
- 73 INSTALLATION GENERALLY
- Standard: To BS EN 14336.
 - Performance: Free from leaks and the audible effects of expansion, vibration and water hammer.
 - Fixing of equipment, components and accessories: Fix securely, parallel or perpendicular to the structure of the building.
 - Preparation: Immediately before installing tanks and cisterns on a floor or platform, clear the surface completely of debris and projections.
 - Corrosion resistance: In locations where moisture is present or may occur, use corrosion resistant fittings/ fixings and avoid contact between dissimilar metals by use of suitable washers, gaskets, etc.
- 74 INSTALLATION OF FEED AND EXPANSION CISTERNS
- Outlet positions: Connect lowest outlets at least 30 mm above bottom of cistern.
 - Water level (minimum): 25 mm below the overflow level of the warning pipe.
 - Access: Fix cistern with a minimum clear space of 350 mm above, or 225 mm if the cistern does not exceed 450 mm in any dimension.
 - Mounting height above the highest point of the circulation system (minimum): 1 m.

Total to Collection:
£

£



- Location: Provide sufficient space for cleaning and maintenance, with enough clearance above the cistern to service the valve and accommodate the expansion pipe.
- Plinth: Firm, level and continuous.
- Joining pipes to thermoplastics cisterns: To BS EN 806-4.
- Insulation: Where the space below the cistern is heated do not insulate the underside.

75 PIPELINE INSTALLATION

- Appearance: Install pipes straight, and parallel or perpendicular to walls, floors, ceilings, and other building elements.
- Pipelines finish: Smooth, consistent bore, clean, free from defects, e.g. external scratching, toolmarks, distortion, wrinkling, and cracks.
- Concealment: Generally conceal pipelines within floor, ceiling and/ or roof voids.
- Access: Locate runs to facilitate installation of equipment, accessories and insulation and allow access for maintenance.
- Arrangement of hot and cold pipelines: Run hot pipelines above cold where routed together horizontally. Do not run cold water pipelines near to heating pipelines or through heated spaces.
- Electrical equipment: Install pipelines clear of electrical equipment. Do not run pipelines through electrical enclosures or above switch gear distribution boards or the like.
- Insulation allowance: Provide space around pipelines to fit insulation without compression.

76 PIPELINE FIXING

- Fixing: Secure and neat.
- Joints, bends and offsets: Minimize.
- Pipeline support: Prevent strain, e.g. from the operation of taps or valves.
- Drains and vents: Fix pipelines to falls. Fit draining taps at low points and vents at high points.
- Thermal expansion and contraction: Allow for thermal movement of pipelines. Isolate from structure. Prevent noise or abrasion of pipelines caused by movement. Sleeve pipelines passing through walls, floors or other building elements.
- Dirt, insects or rodents: Prevent ingress.

77 JOINTS IN COPPER PIPELINES

- Preparation: Cut pipes square. Remove burrs.
- Joints: Neat, clean and fully sealed. Install pipe ends into joint fittings to full depth.
- Bends: Do not use formed bends on exposed pipework, except for small offsets. Form changes of direction with radius fittings.
- Adaptors for connecting dissimilar materials: Purpose designed.
- Substrate and plastics pipes and fittings: Do not damage, e.g. by heat when forming soldered joints.
- Flux residue: Clean off.

78 JOINTS IN THERMOPLASTICS PIPELINES

- Fittings and accessories for joints: Purpose designed.
- Preparation: Cut pipes square. Remove burrs.

Total to Collection:
£

£



- Joints: Neat, clean and fully sealed. Install pipe ends into joint fittings to full depth.
- Compression fittings: Do not overtighten.

79 INSTALLATION OF OIL STORAGE TANKS

- Standard: To BS 5410-1.

80 INSTALLATION OF HEAT PUMPS GENERALLY

- Standards: To BS EN 378-3 and -4.
- Fixing of equipment, components and accessories: Fix securely on purpose-made bases or supports.
- External units: Protect from high winds. Prevent snow from blocking air flow.
- Access: Provide for inspection and servicing of heat pumps and ancillary equipment.
- Refrigerant lines: Short and straight.
- Location of outdoor unit: Away from windows and adjacent buildings.

81 INSTALLATION OF GROUND HEAT EXCHANGER COLLECTORS

- Horizontal loops: Lay on a bed of sand and cover with a further 150 mm layer of sand.
- Vertical heat exchangers: Backfill with high conductivity grout, e.g. bentonite.
- Pipelines: Continuous loop.
- External pipelines: Insulate within 1.5 m of walls, structures or water pipes.
- Warning tape: Install over buried pipes.
- Mechanical couplings: Do not use on buried pipelines.

COMPLETION

90 TESTING

- Standard: To BS EN 14336.
- Notice (minimum): 3 days.
- Preparation: Secure and clean pipework and equipment. Fit cistern/ tank covers.
- Leak testing: Start boiler and run the system until parts are at normal operating temperatures and then allow to cool to cold condition for a period of 3 h.
- Pressure testing: At both hot and cold conditions joints, fittings and components must be free from leaks and signs of physical distress when tested for at least 1 h as follows:
- Systems fed directly from the mains and systems downstream of a booster pump: Apply a test pressure equal to 1.5 times the maximum pressure to which the installation or relevant part is designed to be subjected in operation.
- Systems fed from storage: Apply a test pressure equal to the pressure produced when the storage cistern is filled to its normal maximum operating level.
- Inaccessible or buried pipelines: Carry out hydraulic pressure test to twice the working pressure.

91 SETTING TO WORK AND COMMISSIONING

- Equipment: Check and adjust operation of equipment, controls and safety devices.
- Outlets: Check operation of outlets for satisfactory rate of flow and temperature.

Total to Collection:
£

£



92 DOCUMENTATION

- Manufacturer's operating and maintenance instructions: Submit for equipment and controls.
- System operating and maintenance instructions: Submit for the system as a whole giving optimum settings for controls.
- Record drawings: Submit drawings showing the location of circuits and operating controls.

93 LABELS

- Valve labels: Provide labels on isolating and regulating valves on primary circuits, stating their function.

Total to Collection:
£

£



V90 ELECTRICAL SYSTEMS – DOMESTIC

To be read with Preliminaries/ General conditions.

CONTRACTOR'S DESIGN PORTION

- Design responsibility: Contractor is to allow for the design of Domestic electrical system and supplies in accordance with tender documents and general Unitas SOT Ltd standard specification details.
- Design: Complete the design in accordance with the designated code of practice to satisfy specified performance criteria.

COMPLETION OF DESIGN

- Requirement: Complete the detailed design to satisfy specified performance criteria and coordinate with the detailed design of related and adjacent work.
- Design and production information: contractor is to provide specification information including routes, pipework sizes, connection details, materials and equipment requirements together with drawings, technical information, calculations and manufacturer's literature. Contractor is to also provide scale drawings with dimensions in plan and section.
- Timing of submissions: at tender award.

GENERAL

05 LOW VOLTAGE SUPPLY

- Nature of current: Alternating.
- Phase: Single phase.
- Voltage: 230 V.

20 DESIGN OF LOW VOLTAGE ELECTRICAL INSTALLATION GENERALLY

- Design and detailing: Complete for the electrical installation.
- Standards: In accordance with BS 7671 and the requirements of the Electricity Distributor.
- Design information: Submit calculations, manufacturer's literature and drawings showing equipment positions and routes.

21 DESIGN OF LOW VOLTAGE INCOMING SUPPLY

- Design and detailing: Complete for the low voltage incoming supply.
- Capacity: Determine the anticipated maximum demand of the installation.
- Establishing the supply: Manage and liaise with the Electricity Distributor to establish an incoming electricity supply.
- Electricity Supplier: Western Power
- Liaise with the Electricity Supplier, complete an application for supply of electricity and manage installation of metering equipment.
- Incoming earthing arrangement: Establish with the Electricity Distributor.
- Location: Coordinate the location of the incoming supply and establish the spatial requirements for the Electricity Distributor's equipment and metering.

Total to Collection:
£

£



- 23 LV DISTRIBUTION SYSTEM DESIGN
- Design: To cater for the complete working building.
 - Equipment: Provide electrical supplies to equipment requiring power.
- 24 DESIGN OF GENERAL LIGHTING SYSTEM
- Design and detailing: Complete for the general lighting system.
 - Standard: To SLL 'Code for lighting'.
 - Maintenance: Submit proposals for the maintenance/ relamping regime.
- 25 DESIGN OF EXTERNAL LIGHTING SYSTEM
- Design and detailing: Complete for the external lighting system.
 - Standards: To SLL 'Code for lighting' and CIBSE 'Lighting guide 6'.
- 26 DESIGN AND LIGHTING CALCULATIONS
- Design: Complete for the following lighting systems: 2x dwellings complete
 - Proposals: Submit drawings, technical information, calculations and manufacturers' literature.
 - Lighting calculations:
 - Type: Computer generated point calculations.
 - Submit the following:
 - Luminaire layout drawings.
 - Luminaire photometric data, including flux fraction ratios and polar intensity curves.
 - Lamp technical information.
 - Maintenance factor calculations, including proposals for luminaire maintenance and lamp replacement.
 - Reflectance values used for all wall, ceiling and floor surfaces.
 - Isolux contour plots for the working plane.
 - Schedule of design and calculated maintained average illuminance values.
 - Schedule of design and calculated uniformity values.
- 27 SMALL POWER SYSTEM DESIGN
- Small power outlets: Provide to serve the building and its equipment.
 - Fixed equipment: Provide supplies.

PRODUCTS

- 30 PRODUCTS GENERALLY
- Standard: To BS 7671.
 - CE marking: Required.
- 32 DISTRIBUTION BOARDS
- Standards: To BS EN 61439-1 and BS EN 61439-3.

Total to Collection:
£

£



- Third party certification: ASTA certified.

38 PVC CONDUIT AND FITTINGS

- Standards: To BS 4607-5 or BS EN 61386-1 and BS EN 61386-21.

39 CABLES

- Approval: British Approvals Service for Cables (BASEC) certified.
- Cable sizes not stated: Submit proposals and calculations.

40 PROTECTIVE CONDUCTORS

- Type: Cable conductors with yellow/ green sheath.

41 ELECTRICAL ACCESSORIES

- Standards:
 - Generally: To BS 5733.
 - Switches: To BS EN 60669-1.

45 LUMINAIRES

- Standard: To BS EN 60598-1.

47 LAMPS GENERALLY

- Standards:
 - Compact fluorescent lamps: To BS EN 60901 and BS EN 61199.
 - High pressure mercury lamps: To BS EN 60188 and BS EN 62035.
 - High pressure sodium lamps: To BS EN 62035.
 - Light emitting diodes (LEDs): To BS EN 62031.
 - Metal halide lamps: To BS EN 62035.
 - Tubular fluorescent lamps:
 - Single-capped lamps: To BS EN 60901 and BS EN 61199.
 - Double-capped lamps: To BS EN 60081 and BS EN 61195.
 - Tungsten halogen lamps: To BS EN 60432-2 and BS EN 60357.
 - Lamps of the same type and rating: Same manufacturer.

50 EXTERNAL LUMINAIRES

- Standard: To BS EN 60598-1.

EXECUTION

60 GENERAL EXECUTION

- Standard: In accordance with BS 7671.

Total to Collection:
£

£



63 INSTALLING CONDUIT AND FITTINGS

- Fixing: Fix securely. Fix boxes independently of conduit.
- Drainage outlets: Locate at lowest points in conduit installed externally, and where condensation may occur.
- Location: Position vertically and horizontally in line with equipment served, and parallel with building lines. Locate where accessible.
- Jointing:
 - Number of joints: Minimize.
 - Lengths of conduit: Maximize.
 - Cut ends: Remove burrs, and plug during building works.
 - Movement joints in structure: Manufactured expansion coupling.
 - Threaded steel conduits: Tightly screw to ensure electrical continuity, with no thread showing.
 - Conduit connections to boxes and items of equipment, other than those with threaded entries: Earthing coupling/ male brass bush and protective conductor.
- Changes of direction: Site machine-formed bends, junction boxes and proprietary components. Do not use elbows or tees. Alternatively, use conduit boxes.
 - Connections to boxes, trunking, equipment and accessories: Screwed couplings, adaptors, connectors and glands, with rubber bushes at open ends.

64 INSTALLING TRUNKING AND DUCTING

- Positioning: Accurate with respect to equipment served, and parallel with other services and, where relevant, floor level and other building lines.
- Access: Provide space encompassing cable trunking to permit access for installing and maintaining cables.
- Jointing:
 - Number of joints: Minimize.
 - Lengths of trunking: Maximize.
 - Steel systems: Mechanical couplings. Do not weld. Fit a copper link at each joint to ensure that satisfactory electrical continuity is maintained between the separate sections of trunking, equipment and accessories.
- Movement: Fix securely. Restrain floor mounted systems during screeding.
- Junctions and changes of direction: Proprietary jointing units.
- Cable entries: Fit grommets, bushes or liners.
- Internal fire barriers: Provide to maintain integrity of fire compartment.
- Protection: Fit temporary blanking plates. Prevent ingress of screed and other extraneous materials.
- Service outlet units: Fit when cables are installed.

66 CABLE ROUTES

- Cables generally: Conceal wherever possible.
 - Concealed cable runs to wall switches and outlets: Align vertically or horizontally with the accessory.
- Exposed cable runs: Submit proposals.
 - Orientation: Straight, vertical and/ or horizontal and parallel to walls.

Total to Collection:
£

£



- Distance from other services running parallel: 150 mm minimum.
- Heating pipes: Position cables below.

68 INSTALLING ELECTRICAL ACCESSORIES AND EQUIPMENT

- Location: Throughout
- Arrangement: Coordinate with other wall- or ceiling-mounted equipment.
- Positioning: Accurately and square to vertical and horizontal axes.
- Alignment: Align adjacent accessories on the same vertical or horizontal axis.
- Accessory face plates: Free from any traces of plaster, grout and paint or similar.

70 INSTALLING FINAL CONNECTIONS

- Size: Determine.
- Cable: Heat resisting white flex.
- Length: Allow for equipment removal and maintenance.

72 INSTALLING LUMINAIRES

- Supports: Adequate for weight of luminaire.
- Locations: Submit proposals.

74 EQUIPMENT LABELLING

- Electrical equipment: Install labels indicating purpose.
- Voltage warning notices:
 - Location: Apply to equipment in a position where it can be seen prior to gaining access to live parts when the voltage exceeds 230 V.
 - Format: To BS EN ISO 7010, functional reference number W012, include warnings of the voltage present.
- Distribution boards: Card circuit chart within a reusable clear plastic cover. Fit to the inside of each unit. Include typed information identifying the outgoing circuit references, their device rating, cable type, size, circuit location and details. Label each outgoing way corresponding to the circuit chart.
- Sub-main cables: Label at both ends, with circuit reference using proprietary cable marker sleeves.

78 FINAL FIX

- Accessory faceplates, luminaires and other equipment: Fit after completion of building painting.

79 CLEANING

- Electrical equipment: Clean immediately before handover.
- Equipment not supplied but installed under the electrical works: Clean immediately before handover.

Total to Collection:
£

£



COMPLETION

- 85
- INSPECTION AND TESTING GENERALLY
- Standard: In accordance with BS 7671.
 - Notice before commencing tests (minimum): 24 hours.
 - Labels and signs: Fix securely before system is tested.
 - Certificates: Submit.
 - Number of copies: x2

Total to Collection:

£

£

Z10 PURPOSE MADE JOINERY

To be read with Preliminaries/ General conditions.

10 FABRICATION

- Standard: To BS 1186-2.
- Sections: Accurate in profile and length, and free from twist and bowing. Formed out of solid unless shown otherwise.
 - Machined surfaces: Smooth and free from tearing, wooliness, chip bruising and other machining defects.
- Joints: Tight and close fitting.
- Assembled components: Rigid. Free from distortion.
- Screws: Provide pilot holes. Heads of countersunk screws sunk at least 2 mm below surfaces visible in completed work.
- Adhesives: Compatible with wood preservatives applied and end uses of timber.

20 CROSS SECTION DIMENSIONS OF TIMBER

- General: Dimensions on drawings are finished sizes.
- Maximum permitted deviations from finished sizes:
 - Softwood sections: To BS EN 1313-1.
 - Hardwood sections: To BS EN 1313-2.

30 PRESERVATIVE TREATED WOOD

- Cutting and machining: Completed as far as possible before treatment.
- Extensively processed timber: Retreat timber sawn lengthways, thickened, planed, ploughed, etc.
- Surfaces exposed by minor cutting and/ or drilling: Treat as recommended by main treatment solution manufacturer.

40 MOISTURE CONTENT

- Wood and wood based products: Maintained within range specified for the component during manufacture and storage.

50 FINISHING

- Surfaces: Smooth, even and suitable to receive finishes.
 - Arrises: Eased unless shown otherwise on drawings.
- End grain in external components: Sealed with primer or sealer as section M60 and allowed to dry before assembly.

Total to Collection:
£

£

Z12 PRESERVATIVE/ FIRE RETARDANT TREATMENT

To be read with Preliminaries/ General conditions.

10 TREATMENT APPLICATION

- Timing: After cutting and machining timber, and before assembling components.
- Processor: Licensed by manufacturer of specified treatment solution.
- Certification: For each batch of timber provide a certificate of assurance that treatment has been carried out as specified.

20 COMMODITY SPECIFICATIONS

- Standard: Current edition of the Wood Protection Association (WPA) publication 'Industrial wood preservation specification and practice'.

25 PRESERVATIVE TREATMENT SOLUTION STRENGTHS/ TREATMENT CYCLES

- General: Select to achieve specified service life and to suit treatability of specified wood species.

35 WATER-BASED ORGANIC PRESERVATIVE TREATMENT

- Solution:
 - Manufacturer: Contractor choice / Crown
 - Application: High pressure impregnation.
- Moisture content of wood:
 - At time of treatment: Not more than 28%.
 - After treatment: Timber to be surface dry before use.

70 MAKING GOOD TO PROTECTION TREATMENT ON SITE

- Fire retardant/ preservative solution: Compatible with off-site treatment.
- Application: In accordance with preservative manufacturer's recommendations.

Total to Collection:
£

£



Z20 FIXINGS AND ADHESIVES

To be read with Preliminaries/ General conditions.

10 FIXINGS AND FASTENERS GENERALLY

- Integrity of supported components: Select types, sizes, quantities and spacings of fixings, fasteners and packings to retain supported components without distortion or loss of support.
- Components, substrates, fixings and fasteners of dissimilar metals: Isolate with washers or sleeves to avoid bimetallic corrosion.
- General usage: To recommendations of fastener manufacturers and/ or manufacturers of components, products or materials fixed and fixed to.
- Fixings: To be in straight lines, at regular centres.

25 FASTENER DURABILITY

- Materials: To have:
 - Bimetallic corrosion resistance appropriate to items being fixed.
 - Atmospheric corrosion resistance appropriate to fixing location.
- Appearance: Submit samples on request.

30 FIXINGS THROUGH FINISHES

- Penetration of fasteners and plugs into substrate: To achieve a secure fixing.

35 PACKINGS

- Materials: Noncompressible, corrosion proof.
- Area of packings: Sufficient to transfer loads.

40 CRAMP FIXINGS

- Fasteners: Fix cramps to frames with screws of same material as cramps.
- Fixings in masonry work: Fully bed in mortar.

50 PELLETTED COUNTERSUNK SCREW FIXINGS

- Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
- Pellets: Cut from matching timber, grain matched, glued in to full depth of hole.
- Finished level of pellets: Flush with surface.

55 PLUGGED COUNTERSUNK SCREW FIXING

- Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
- Plugs: Glue in to full depth of hole.
- Finished level of plugs: Projecting above surface.

60 APPLYING ADHESIVES

Total to Collection:
£

£



- Surfaces: Clean. Regularity and texture to suit bonding and gap filling characteristics of adhesive.
- Support and clamping during setting: Provide as necessary. Do not mark surfaces of or distort components being fixed.
- Finished adhesive joints: Fully bonded. Free of surplus adhesive.

Total to Collection:
£

£



Z21 MORTARS

To be read with Preliminaries/ General conditions.

10 MORTAR MIXES

- Specification: Proportions and additional requirements for mortar materials are specified elsewhere.

20 SAND FOR SITE MADE CEMENT GAUGED MASONRY MORTARS

- Standard: To BS EN 13139.
- Grading: 0/2 (FP or MP).
 - Fines content where the proportion of sand is specified as a range (e.g. 1:1: 5-6):
 - Lower proportion of sand: Use category 3 fines.
 - Higher proportion of sand: Use category 2 fines.
- Sand for facework mortar: Maintain consistent colour and texture. Obtain from one source.

25 SAND FOR LIME:SAND MASONRY MORTARS

- Type: Sharp, well graded.
- Quality, sampling and testing: To BS EN 13139.
- Grading/ Source: As specified elsewhere.

30 READY-MIXED LIME:SAND FOR CEMENT GAUGED MASONRY MORTARS

- Standard: To BS EN 998-2.
- Lime: Nonhydraulic to BS EN 459-1.
 - Type: CL 90S.
- Pigments for coloured mortars: To BS EN 12878.

40 CEMENTS FOR MORTARS

- Cement: To BS EN 197-1 and CE marked.
 - Types:
 - Portland cement, CEM I.
 - Portland limestone cement, CEM II/A-LL.
 - Portland slag cement, CEM II/B-S.
 - Portland fly ash cement, CEM II/B-V.
 - 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:
 - Types:
 - To BS EN 197-1 Sulfate resisting Portland cement, CEM I/SR and CE marked.
 - To BS EN 197-1 fly ash cement, CEM II/B-V and CE marked.
 - Strength class: 32.5, 42.5 or 52.5.

Total to Collection:
£

£



- Masonry cement: To BS EN 413-1 and CE marked.
- Class: MC 12.5.

50 ADMIXTURES FOR SITE MADE MORTARS

- Air entraining (plasticizing) admixtures: To BS EN 934-3 and compatible with other mortar constituents.
- Other admixtures: Submit proposals.
- Prohibited admixtures: Calcium chloride, ethylene glycol and any admixture containing calcium chloride.

60 MAKING MORTARS GENERALLY

- Batching: By volume. Use clean and accurate gauge boxes or buckets.
- Mix proportions: Based on dry sand. Allow for bulking of damp sand.
- Mixing: Mix materials thoroughly to uniform consistency, free from lumps.
 - Mortars containing air entraining admixtures: Mix mechanically. Do not overmix.
- Contamination: Prevent intermixing with other materials.

70 MAKING HYDRAULIC LIME:SAND MORTARS

- Mixing hydrated hydraulic lime:sand: Follow the lime manufacturer's recommendations for each stage of the mix. - Water quantity: Only sufficient to produce a workable mix.

Total to Collection:
£

£

Z22 SEALANTS

To be read with Preliminaries/ General conditions.

PRODUCTS

- 31 JOINTS (general)
- Primer, backing strip, bond breaker: Types recommended by sealant manufacturer.

EXECUTION

- 61 SUITABILITY OF JOINTS
- Presealing checks:
 - Joint dimensions: Within limits specified for the sealant.
 - Substrate quality: Surfaces regular, undamaged and stable.
- 62 PREPARING JOINTS
- Surfaces to which sealant must adhere:
 - Remove temporary coatings, tapes, loosely adhering material, dust, oil, grease, surface water and contaminants that may affect bond.
 - Clean using materials and methods recommended by sealant manufacturer.
 - Vulnerable surfaces adjacent to joints: Mask to prevent staining or smearing with primer or sealant.
 - Backing strip and/ or bond breaker installation: Insert into joint to correct depth, without stretching or twisting, leaving no gaps.
 - Protection: Keep joints clean and protect from damage until sealant is applied.
- 63 APPLYING SEALANTS
- Substrate: Dry (unless recommended otherwise) and unaffected by frost, ice or snow.
 - Environmental conditions: Do not dry or raise temperature of joints by heating.
 - Sealant application: Fill joints completely and neatly, ensuring firm adhesion to substrates.
 - Sealant profiles:
 - Butt and lap joints: Slightly concave.
 - Fillet joints: Flat or slightly convex.
 - Protection: Protect finished joints from contamination or damage until sealant has cured.

5. Summary and Collection

The Contractors offer must include for all works shown and described within the Tender document as being necessary for the complete and proper execution of the Works.

KEY ACTIVITIES	Totals
Preliminaries	
○ Wayleaves, licenses, road closures, traffic management and other statutory permissions	£
○ Liaison with Stake holders	£
○ Site Set up / establishment	£
○ Management and Staff	£
○ Site services and facilities	£
○ Plant and Equipment / Temporary Works	£
○ Insurances	£
○ Provisional Sums	£
Sub Total	£
Design	
○ Steel Work Design and Calculations	£
○ MEP Design and Calculations Inc Utility provider liaison and works for separation	£
Sub Total	£
Contract Works	
○ Enabling Works	£
○ Demolition and Strip Out	£
○ External Works Superstructure Works	£
○ Internal Works	£
○ Joinery	£
○ Mechanical	£
○ Sanitaryware	£
● Drainage	£
○ Electrical	£
○ Decoration	£
○ Flooring	£
● External Works	£
○ Completion	£
Sub Total	£
Total	£

6. Form of Tender

7. Declaration of Bona Fide Tender

Section 7

Declaration of Bona Fide Tender

atkinsglobal.com
snclavalin.com

Dear Sirs,

The essence of competitive Tendering is that Unitas SOT Ltd shall receive bona fide competitive Tenders from all companies Tendering.

In recognition of this principle, we declare that this is a bona fide Tender, intended to be competitive and that we have not fixed or adjusted the amount of the Tender by or under or in accordance with any agreement or arrangement with any other person.

We further declare that we have not done and we undertake that we will not do any of the following acts:

- (a) Communicate with a person, other than the person calling for this Tender the amount or approximate amount of the proposed Tender.
- (b) Enter into any agreement or arrangement with any other person that he shall refrain from Tendering or as to the amount of any Tender to be submitted.
- (c) Offer to pay or give, or agree to pay or give, any sum of money or valuable consideration directly or indirectly to any person for doing or having done or causing or having caused to be done in relation to any other Tender or proposed Tender for the requirement any act or thing of the sort described above.

In this declaration the word "persons" includes any person and anybody or association, corporate or incorporate. The words "agreement or arrangement" include any such transaction, formal or informal, whether legally binding or not.

Signed _____ Dated _____

Name _____ Position _____

For and on behalf of

8. Non-Compliance Statement

Section 8**Non-compliance Statement**

atkinsglobal.com

snclavalin.com

NOTE TO TENDERER:

Detail below all matters (Technical, Commercial or Contractual) in which your Tender response does not comply with the requirements laid down in the Invitation to Tender documentation. Sequentially number each point in the first column for ease of reference. If required, take copies of this blank form for additional points of non-compliance. Cross reference to any supporting information provided separately.

TENDERER: _____

DATE: _____

PAGE ____ OF ____

Section Nr in Tender	Matter Not Complied with in Tender	Extent of Non-Compliance, Alternatives offered & effect on the tender requirement

9. Domestic Subcontractors

Section 9**List of Domestic Subcontractors**atkinsglobal.comsnclavalin.com**NOTE TO TENDERER:**

In order for Uritas SOT Ltd to monitor tendering procedures, the Contractor is required to list below the names of listed domestic subcontractors from which he has received a tender and he proposes to employ in the execution of the Works on this project:

DESCRIPTION OF WORK	NAME OF SUB CONTRACTOR

Appendices

Appendix A.

A.1. Tender Drawings

NOTES

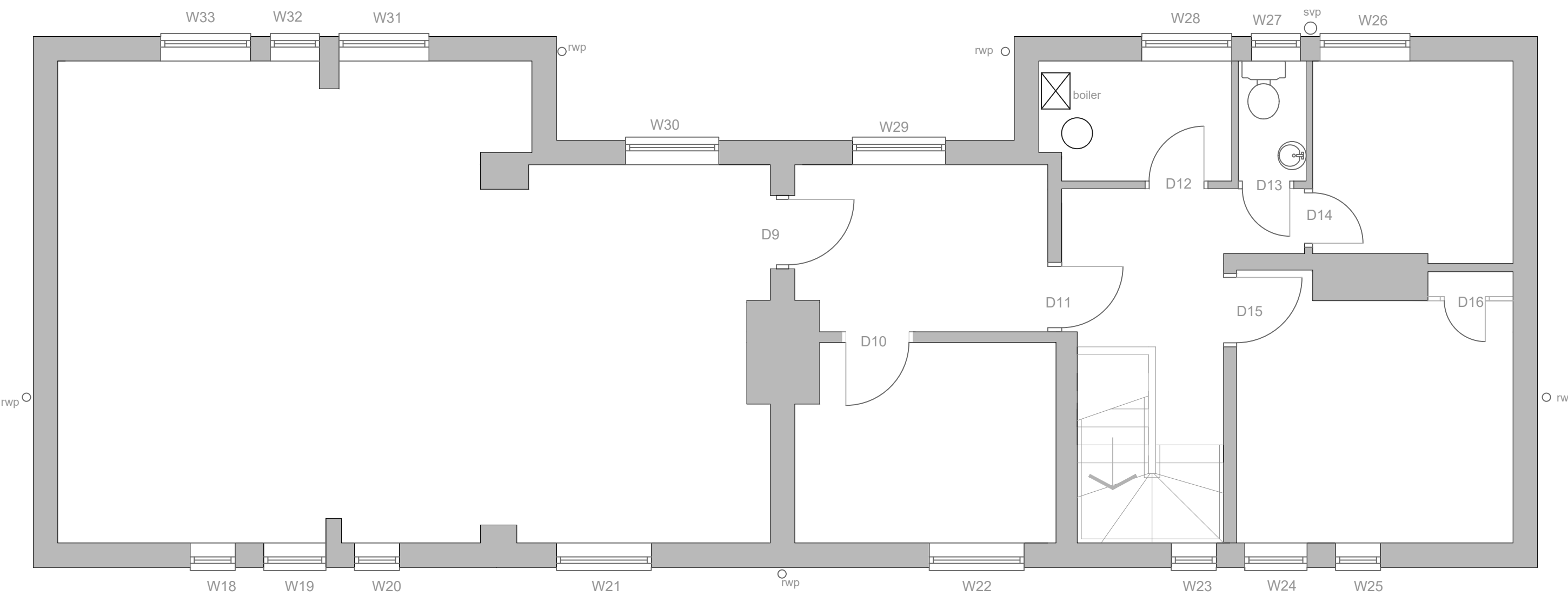
- DO NOT SCALE FROM THIS DRAWING.
- ALL MEASUREMENTS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION AND ALL RELEVANT ARCHITECTURAL, ELECTRICAL, MECHANICAL AND STRUCTURAL DRAWINGS.



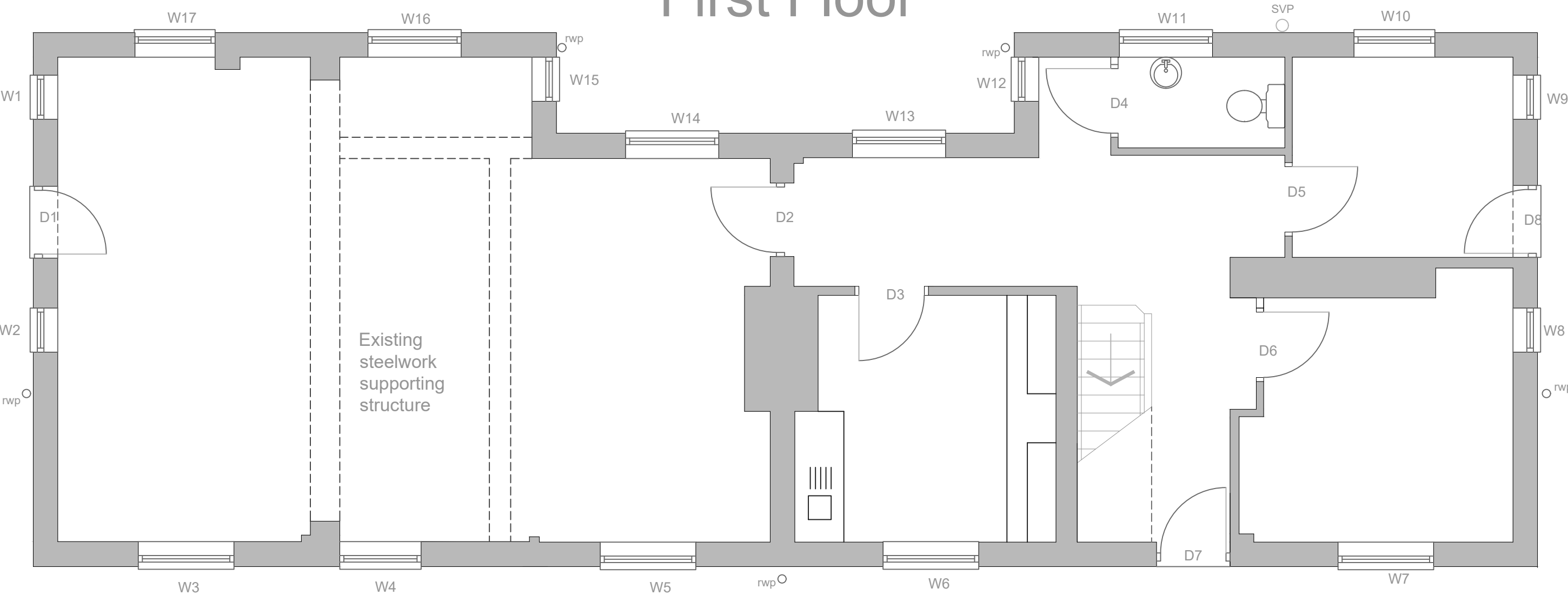
Front Elevation



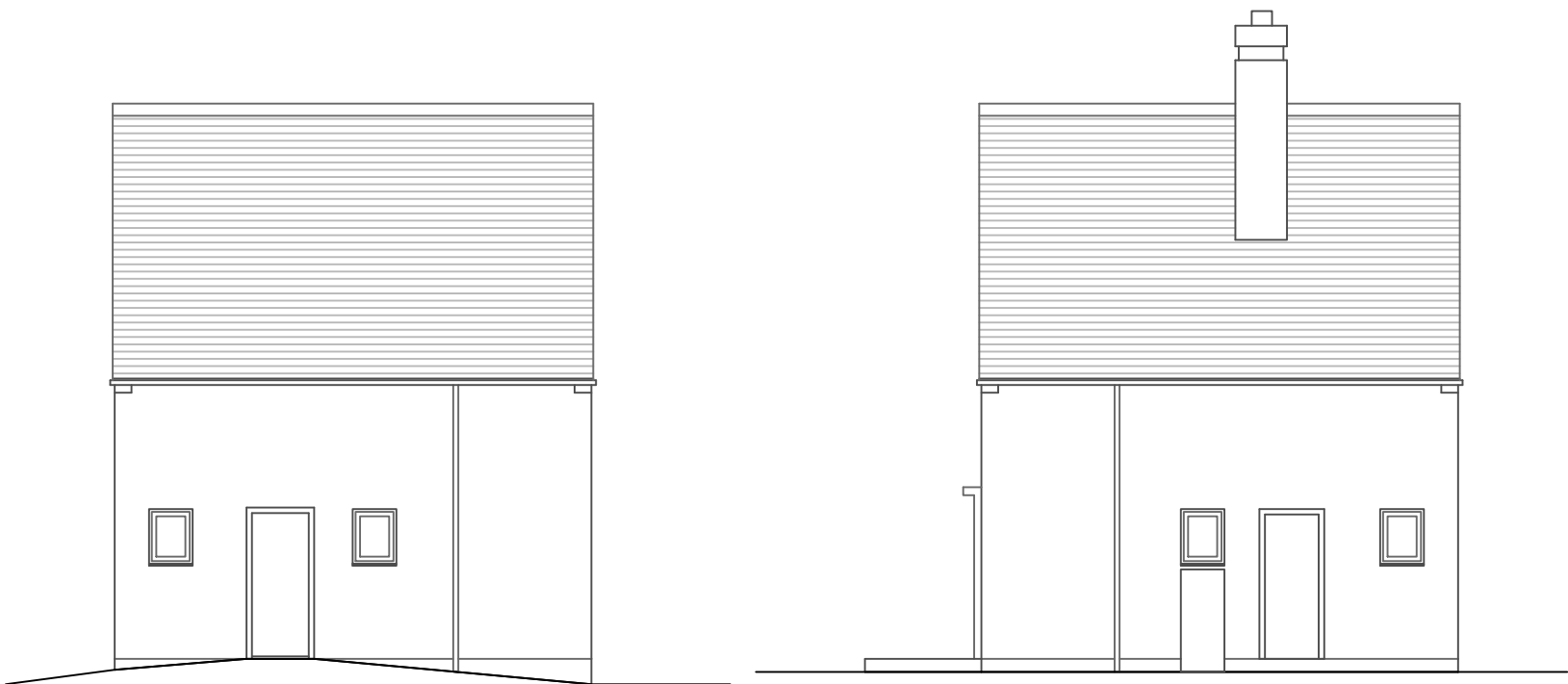
Rear Elevation



First Floor



Ground Floor



Side Elevation (L)
1.100

Side Elevation (R)
1.100

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

For details of site-wide and general risks, to be read in conjunction with these notes, see the contract documents and, where works are notifiable, the pre-construction information pack issued by the CDM co-ordinator

In addition to the risks normally associated with the types of work detailed on this drawing, note the following risks and information:

CONSTRUCTION

- Ci.
- Cii.
- Ciii.
- Civ.

DISMANTLING / DEMOLITION (Future)

- Di.
- Dii.
- Diii.
- Div.

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE
Faithful+Gould
No 2 Canal Arm
Festival Park
Stoke-on-Trent, ST1 5UR
Tel: (01782) 222233
Fax: (01782) 222244

CLIENT:

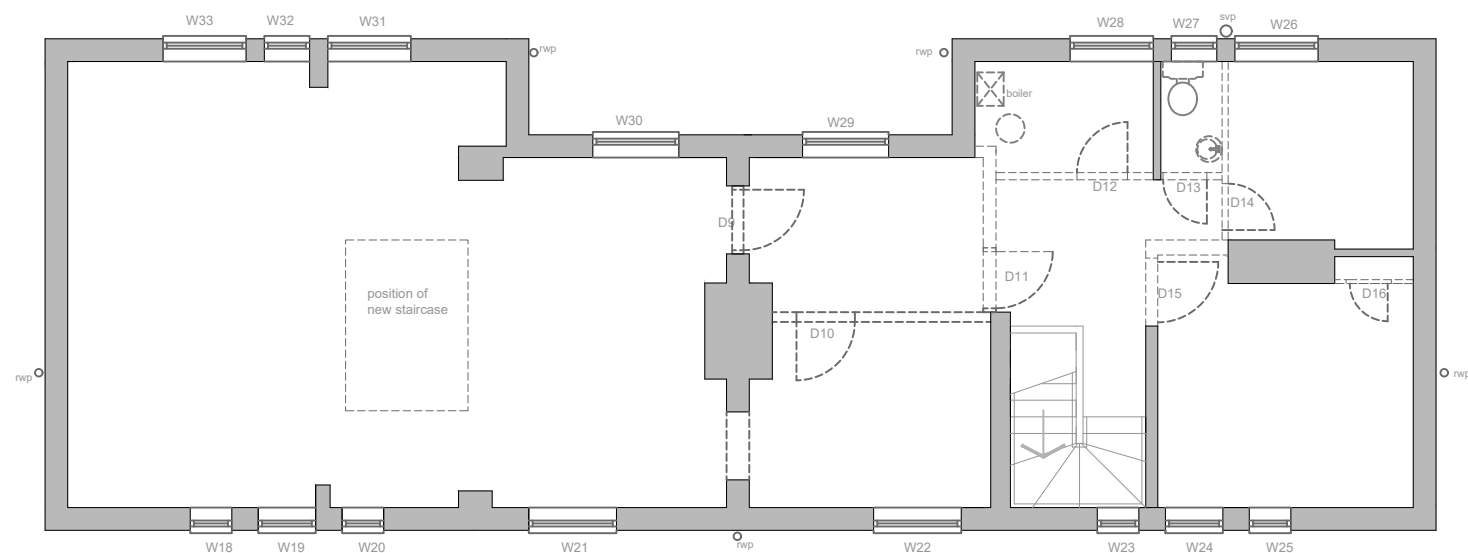
STOKE-ON-TRENT CITY COUNCIL

PROJECT:
UNITAS - THE SQUARE RESIDENTIAL
CONVERSATION PROJECT
MEIR, STOKE ON TRENT

TITLE:
EXISTING PLANS AND ELEVATIONS

SCALE: 1:50
PAPER SIZE: A1
DESIGNED: DW
DRAWN: IRW
CHECKED: DW
OFFICE: STOKE
DATE: April 2019
DATE: April 2019
DATE: April 2019
DATE: April 2019

PROJECT NO: 5181996
DISCIPLINE: BS
DRG NO: 01 - 001
REV: .



The contractor is to include for removal of ceiling and floor finishes and removal of existing timber supporting structure ready for installation of new softwood staircase.

[illegible]

[illegible]

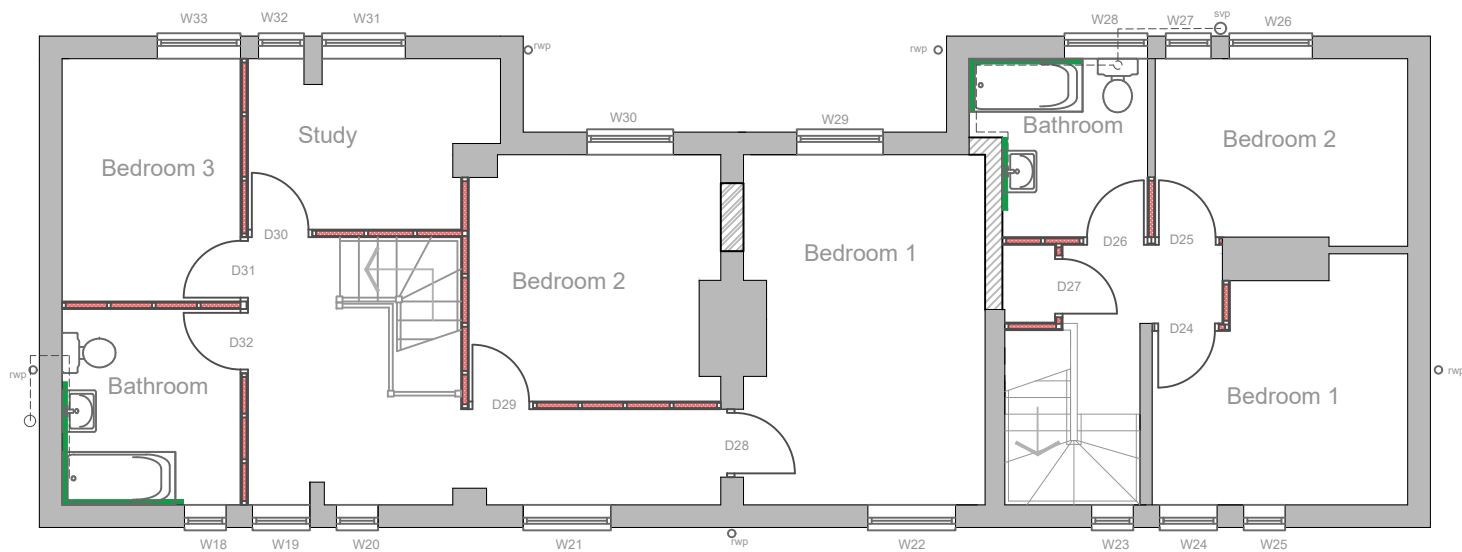
CLIENT:
STOKE-ON-TRENT CITY COUNCIL

PROJECT:
UNITAS - THE SQUARE RESIDENTIAL
CONVERSATION PROJECT
MEIR, STOKE ON TRENT

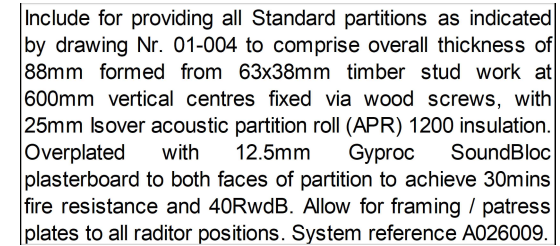
TITLE: PROPOSED GENERAL LAYOUT PLANS

SCALE: 1:50	PAPER SIZE: A1	DESIGNED: DW	DRAWN: IRW	CHECKED: DW	AUTHORISED: DW
	OFFICE: STOKE	DATE: April 2019	DATE: April 2019	DATE: April 2019	DATE: April 2019

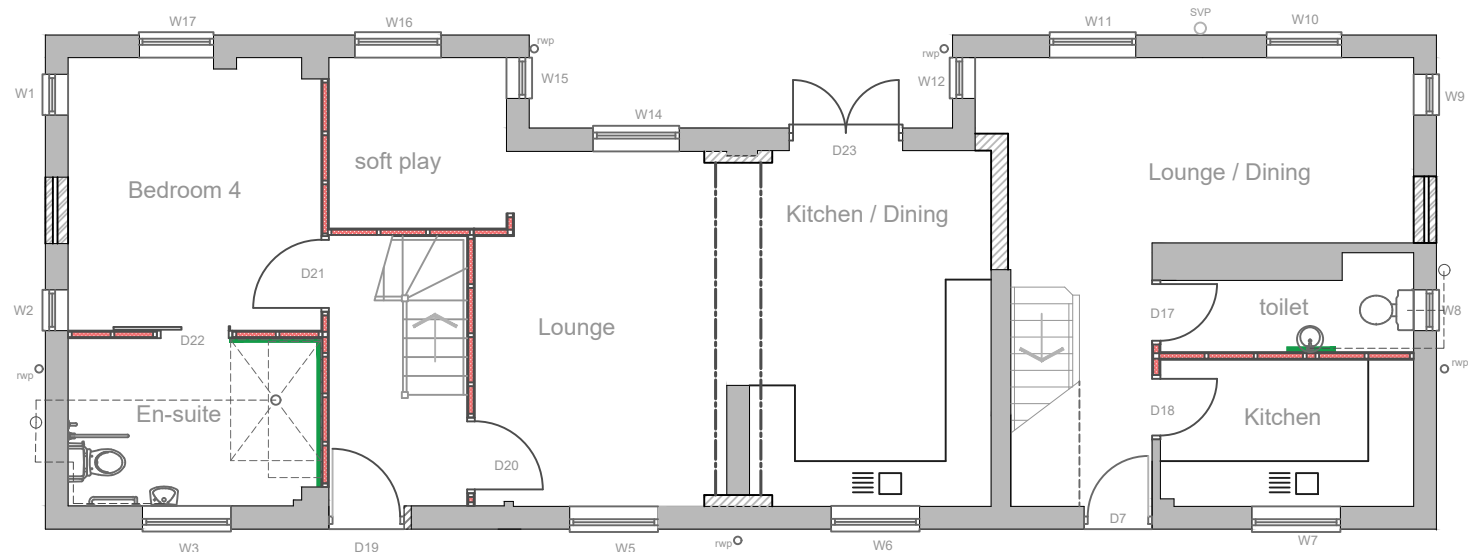
PROJECT NO:	DISCIPLINE:	DRG NO:	REV:
5181996	BS	01 - 003	.



Partition Schedule



Contractor to allow for the installation of a new 2 storey single skin 100mm medium density blockwork wall to create the party wall. Allow for breaking out the screed at the base of the wall down to 'bare slab' and include for DPC layer on which to build the new blockwork. Include for a Gypliner Universal lining system to one side of the wall with a minimum 85mm cavity (framing at 600mm c/c) with 50mm Isover Acoustic Partition roll into the cavity (or similar approved) - Lined with a double layer of 12.5mm Gyproc soundbloc plasterboard (or similar approved) and 12.5mm Gyproc soundbloc dabbled



Internal Party Detail
Scale 1:20

50mm Isover APR 1200 insulation

Gyproc SoundBloc ACTIV air Acoustice Resistant Plasterboard

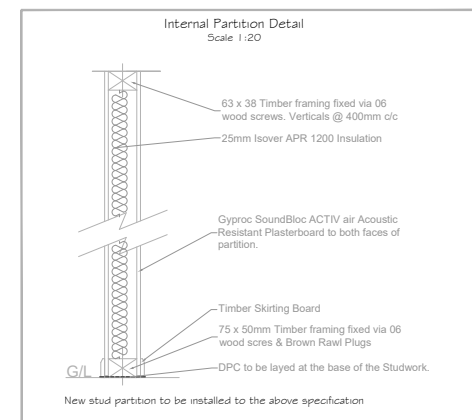
Gyproc Duraline plasterboard x2 layers

100mm medium density blockwork

Gypliner Universal wall lining system
85mm cavity (framing at 600mm centres)

G/L

Screed to be broken out to allow new blockwork to be built off the concrete base - DPC to be laid off concrete base.



1. DO NOT SCALE FROM THIS DRAWING.
2. ALL MEASUREMENTS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
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[illegible]

CLIENT:
STOKE-ON-TRENT CITY COUNCIL

PROJECT:
UNITAS - THE SQUARE RESIDENTIAL
CONVERSATION PROJECT
MEIR, STOKE ON TRENT

TITLE:
WALLS AND PARTITION LAYOUT

SCALE:	PAPER SIZE:	DESIGNED:	DRAWN:	CHECKED:	AUTHORISED:
1:100	A3	DW	IRW	DW	DW
	OFFICE:	DATE:	DATE:	DATE:	DATE:
	STOKE	April 2019	April 2019	April 2019	April 2019

PROJECT NO:	DISCIPLINE:	DRG NO:	REV:
5181996	BS	01 - 004	.



Tiling - Provide ceramic wall tiles 200mm x 250mm Large "Bumpy" to the areas as indicated on drawing 01-006 to 01-008.

The shower 'wet area' to the baths will be fully tiled including for all cutting, edges, angles & finish with a silicone sealant bead in corners and perimeter of the bath in accordance with the existing contract. The remainder of the bath area allow for 3 rows splash back tiling as described elsewhere.

new SVP connected to new
underground drainage

W.C - supply and install Armitage Shanks Doc M Contour 21 Close Coupled Pack RH ref: S6967 or similar approved. Pack includes: WC pan, water saving delay fill cistern with spatula lever, grab rails, hinged support rail with toilet roll holder, seat no cover with retaining buffers, copper tails on TMV3 mixer tap.

1800x700 changing table

1500x1200 shower tray

Allow for taking up floor coverings for new shower tray & drainage. Notch joists as required, fix waste to joists, laid to falls & connect externally to SVP.

Wash Hand Basin - Lavatory basin 560mm and pedestal B65000-Ideal Standard OVA S2955 or alike equivalent to British Standards

Wash Hand basin lever taps pair - 534588 Bristian Design Utility lever Basin taps Chrome DUL1/ 2C

ECO WHB water flow limiter 6L per second - 534552 Bristian ECO Flow Limiter 6L Per minute Basin tap outlet white ECOTAP6.

Shower Tray - Contractor to allow for installing new GRP level access shower tray former 'Tuff form 1500x1200mm' or similar approved in the position indicated by drawing XXX

FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE

NOTES

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CONSTRUCTION

Ci.

Cii.

Ciii.

Civ.

DISMANTLING / DEMOLITION (Future)

Di.

Diii.

Diii.

Div.

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A blank sheet of graph paper with a grid of squares. The grid consists of 10 columns and 10 rows of small squares, forming a larger square area. The lines are thin and black, and the background is white. There are no margins or other markings on the page.

REV	DESCRIPTION	BY	DATE	CHK'D	AUTH
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FAITHFUL+GOULD
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Faithful+Gould
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Stoke-on-Trent, ST1 5UR
Tel: (01782) 222233
Fax: (01782) 222244

CLIENT:
STOKE-ON-TRENT CITY COUNCIL

PROJECT:
UNITAS - THE SQUARE RESIDENTIAL
CONVERSATION PROJECT
MEIR, STOKE ON TRENT

TITLE:
9 THE SQUARE. GROUND FLOOR.
ENSUITE LAYOUT

SCALE:	PAPER SIZE:	DESIGNED:	DRAWN:	CHECKED:	AUTHORISED:
1:20	A3	DW	IRW	DW	DW
	OFFICE:	DATE:	DATE:	DATE:	DATE:
	STOKE	April 2019	April 2019	April 2019	April 2019

PROJECT NO:	DISCIPLINE:	DRG NO:	REV:
5181996	BS	01 - 005	.



W.C. pan, (200295) , WC Toilet seat and cover (200303)
Armitage Shanks B87300 or alike equivalent to British
Standards
Orion S4045 WC cistern LL dual flush or alike equivalent to
British Standards
Toilet seat and cover - Orion ref: B87300 54045

Tiling - Provide ceramic wall tiles 200mm x 250mm Large "Bumpy" to the areas as indicated on drawing 01-006 to 01-008.

Proposed waste connection to new SVP

new SVP connected to new
underground drainage

Bath - Pressed steel enamel bath to current British Standards - Twyford's 'Celtic' ref: A01895 - BS1572 WH 1700 2TH A/S TG BATH.

Include for MDF decorative bath panels 1700 - ref: Tavistock Milton A83207 Q313 1700 Front MDF Bath Panel white fixed onto and including softwood frame.

Overbath shower - Bristan Utility Lever Thermo Combination in Chrome or alike equivalent to British Standards

Bristan Shower Kit Chrome KIT 100C or alike equivalent to British Standards

Proprietary straight or curved shower rail and curtain to suit layout.

FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE

NOTES

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<p>DISMANTLING / DEMOLITION (Future)</p> <p>Di.</p> <p>Dii.</p> <p>Diii.</p> <p>Div.</p>
<p>It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.</p>

[illegible]

REV	DESCRIPTION	BY	DATE	CHK'D	AUT
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FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE

Faithful+Gould
No 2 Canal Arm,
Festival Park,
Stoke-on-Trent, ST1 5UL
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Fax: (01782) 222244

CLIENT:
STOKE-ON-TRENT CITY COUNCIL

PROJECT:
UNITAS - THE SQUARE RESIDENTIAL
CONVERSATION PROJECT
MEIR, STOKE ON TRENT

TITLE:
9 THE SQUARE. FIRST FLOOR.
BATHROOM LAYOUT

SCALE:	PAPER SIZE:	DESIGNED:	DRAWN:	CHECKED:	AUTHORIS
1:20	A3	DW	IRW	DW	DW
	OFFICE:	DATE:	DATE:	DATE:	DATE:
	STOKE	April 2019	April 2019	April 2019	April 2019

PROJECT NO:	DISCIPLINE:	DRG NO:	REV:
5181996	BS	01 - 006	.



Tiling - Provide ceramic wall tiles 200mm x 250mm Large "Bumpy" to the areas as indicated on drawing 01-006 to 01-008.

Proposed waste connection to new SVP and underground drainage

new SVP connected to new
underground drainage

W.C. pan, (200295) , WC Toilet seat and cover (200303)
Armitage Shanks B87300 or alike equivalent to British
Standards

Orion S4045 WC cistern LL dual flush or alike equivalent to British Standards
Toilet seat and cover - Orion ref: B87300 54045

Wash Hand Basin - Lavatory basin 560mm and pedestal B65000-Ideal Standard OVA S2955 or alike equivalent to British Standards

Wash Hand basin lever taps pair - 534588 Bristian Design
Utility lever Basin taps Chrome DUL1/ 2C
ECO WHB water flow limiter 6L per second - 534552 Bristian
ECO Flow Limiter 6L Per minute Basin tap outlet white
ECOTAP6.

include for timber patress to rear of whb

Splash backs to be formed using 3 rows in height to the wash hand basin and all exposed edges finished with pvc trim 1.2mm x 2mm, tile corners to be 2mm.

FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE

NOTES

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CONSTRUCTION

Ci. _ _ _ _ _
Cii.
Ciii.
Civ.

DISMANTLING / DEMOLITION (Future)

Di.
Dii.
Diii.
Div.

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REV	DESCRIPTION	BY	DATE	CHK'D	AUTH
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CONSTRUCTIVE EXPERTISE

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No 2 Canal Arm,
Festival Park,
Stoke-on-Trent, ST1 5UR
Tel: (01782) 222233
Fax: (01782) 222244

CLIENT:
STOKE-ON-TRENT CITY COUNCIL

PROJECT:
UNITAS - THE SQUARE RESIDENTIAL
CONVERSATION PROJECT
MEIR, STOKE ON TRENT

TITLE:
11 THE SQUARE. GROUND FLOOR.
TOILET LAYOUT

SCALE:	PAPER SIZE:	DESIGNED:	DRAWN:	CHECKED:	AUTHORISED:
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	OFFICE:	DATE:	DATE:	DATE:	DATE:
	STOKE	April 2019	April 2019	April 2019	April 2019

PROJECT NO:	DISCIPLINE:	DRG NO:	REV:
5181996	BS	01 - 007	.



The shower 'wet area' to the baths will be fully tiled including for all cutting, edges, angles & finish with a silicone sealant bead in corners and perimeter of the bath in accordance with the existing contract. The remainder of the bath area allow for 3 rows splash back tiling as described elsewhere.

Bath - Pressed steel enamel bath to current British Standards -
 Twyford's 'Celtic' ref: A01895 - BS1572 WH 1700 2TH A/S TG
 BATH.

Include for MDF decorative bath panels 1700 - ref: Tavistock
 Milton A83207 Q313 1700 Front MDF Bath Panel white fixed
 onto and including softwood frame.

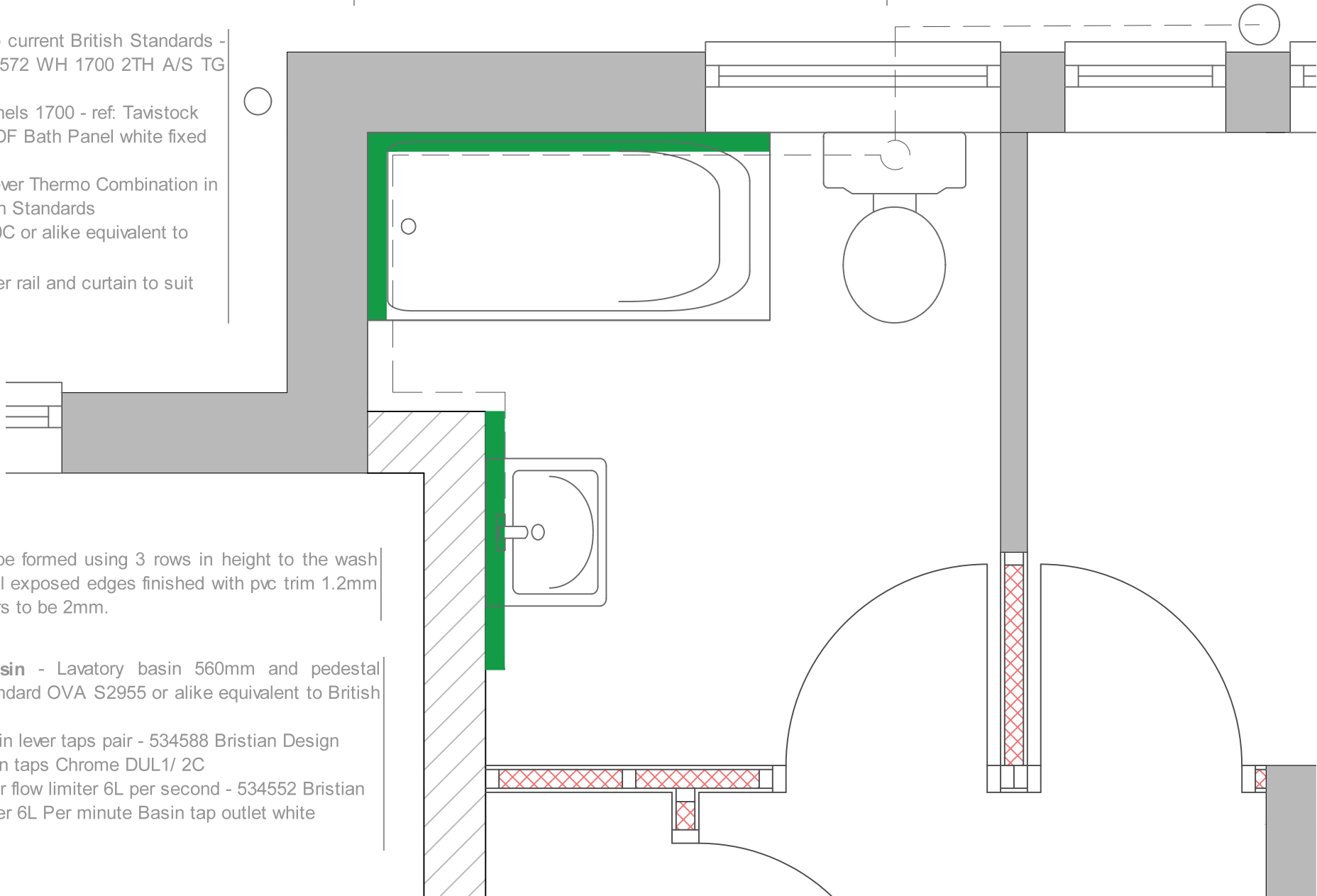
Overbath shower - Bristan Utility Lever Thermo Combination in
 Chrome or alike equivalent to British Standards
 Bristan Shower Kit Chrome KIT 100C or alike equivalent to
 British Standards

Proprietary straight or curved shower rail and curtain to suit
 layout.

W.C. pan, (200295) , WC Toilet seat and cover (200303)
Armitage Shanks B87300 or alike equivalent to British
Standards
Orion S4045 WC cistern LL dual flush or alike equivalent to
British Standards
Toilet seat and cover - Orion ref: B87300 54045

Tiling - Provide ceramic wall tiles 200mm x 250mm Large "Bumpy" to the areas as indicated on drawing 01-006 to 01-008.

----- Proposed waste connection to new SVP and underground drainage



Splash backs to be formed using 3 rows in height to the wash hand basin and all exposed edges finished with pvc trim 1.2mm x 2mm, tile corners to be 2mm.

Wash Hand Basin - Lavatory basin 560mm and pedestal
B65000-Ideal Standard OVA S2955 or alike equivalent to British
Standards
Wash Hand basin lever taps pair - 534588 Bristian Design
Utility lever Basin taps Chrome DUL1/ 2C
ECO WHB water flow limiter 6L per second - 534552 Bristian
ECO Flow Limiter 6L Per minute Basin tap outlet white
ECOTAP6.

NOTES

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CONSTRUCTION Ci. Cii. Ciii. Civ.	
DISMANTLING / DEMOLITION (Future) Di. Dii. Diii. Div.	
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The diagram consists of a large rectangle divided into four equal vertical sections by three vertical lines. Each section contains a vertical line with tick marks, representing a timeline or sequence of events.

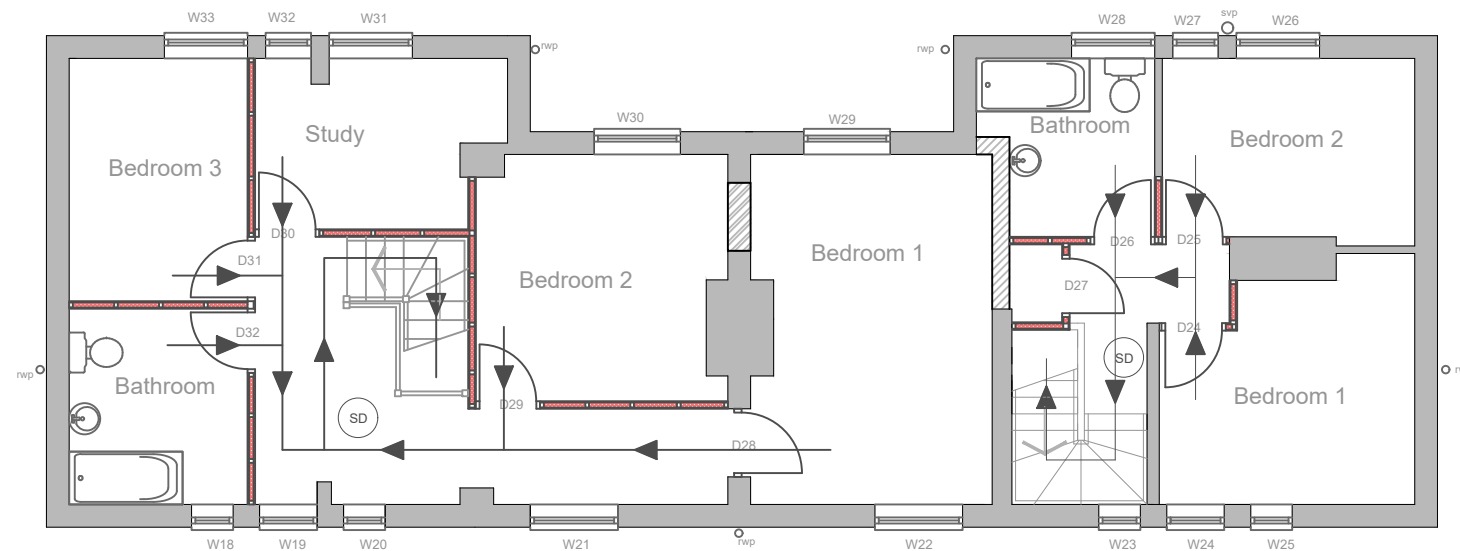
REV	DESCRIPTION	BY	DATE	CHK'D	AUTH
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CLIENT: STOKE-ON-TRENT CITY COUNCIL

PROJECT:
UNITAS - THE SQUARE RESIDENTIAL
CONVERSATION PROJECT
MEIR, STOKE ON TRENT

TITLE:
11 THE SQUARE. FIRST FLOOR.
BATHROOM LAYOUT

SCALE: 1:20	PAPER SIZE:	DESIGNED:	DRAWN:	CHECKED:	AUTHORISED:
	A3	DW	IRW	DW	DW
	OFFICE:	DATE:	DATE:	DATE:	DATE:
	STOKE	April 2019	April 2019	April 2019	April 2019



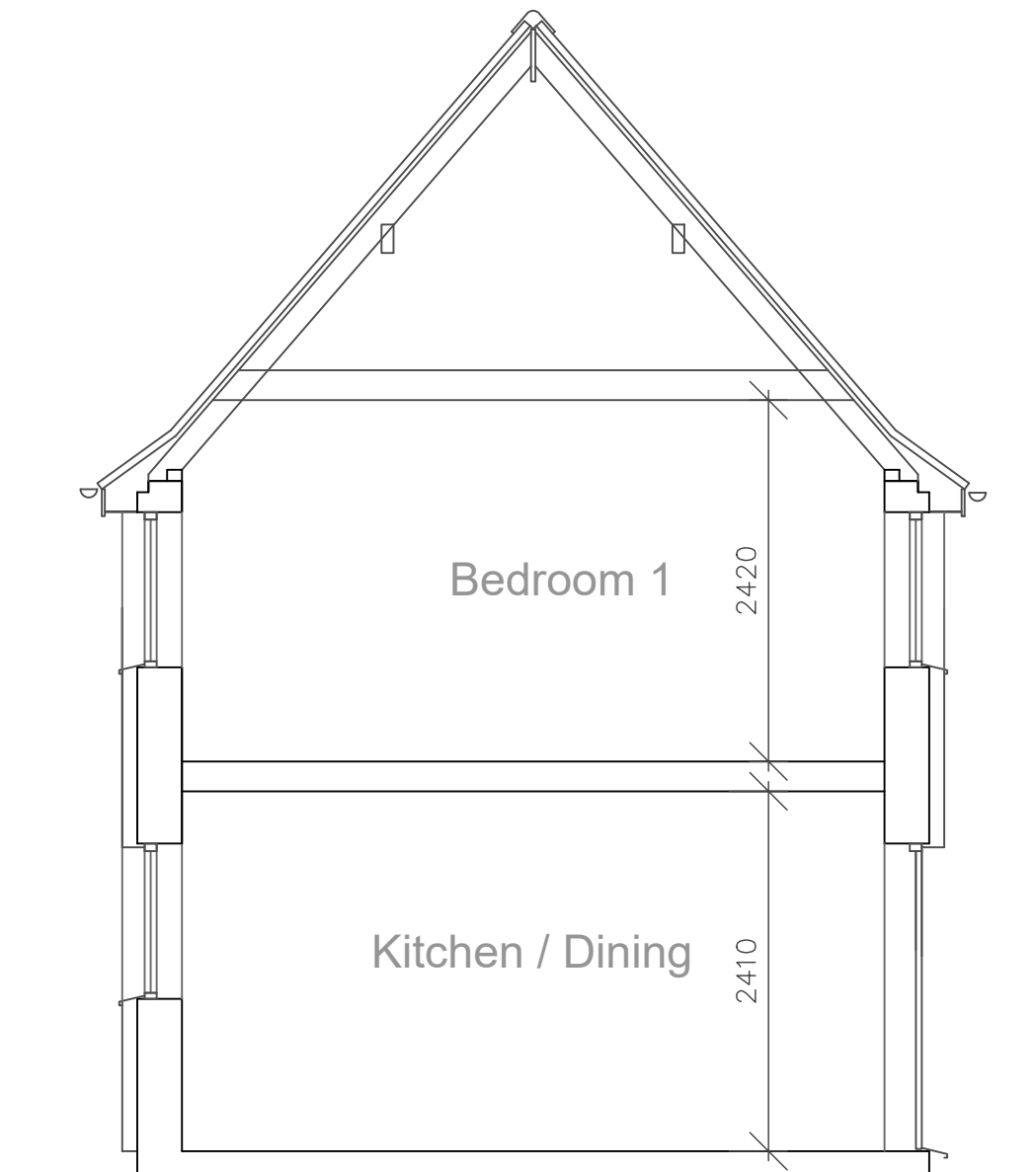
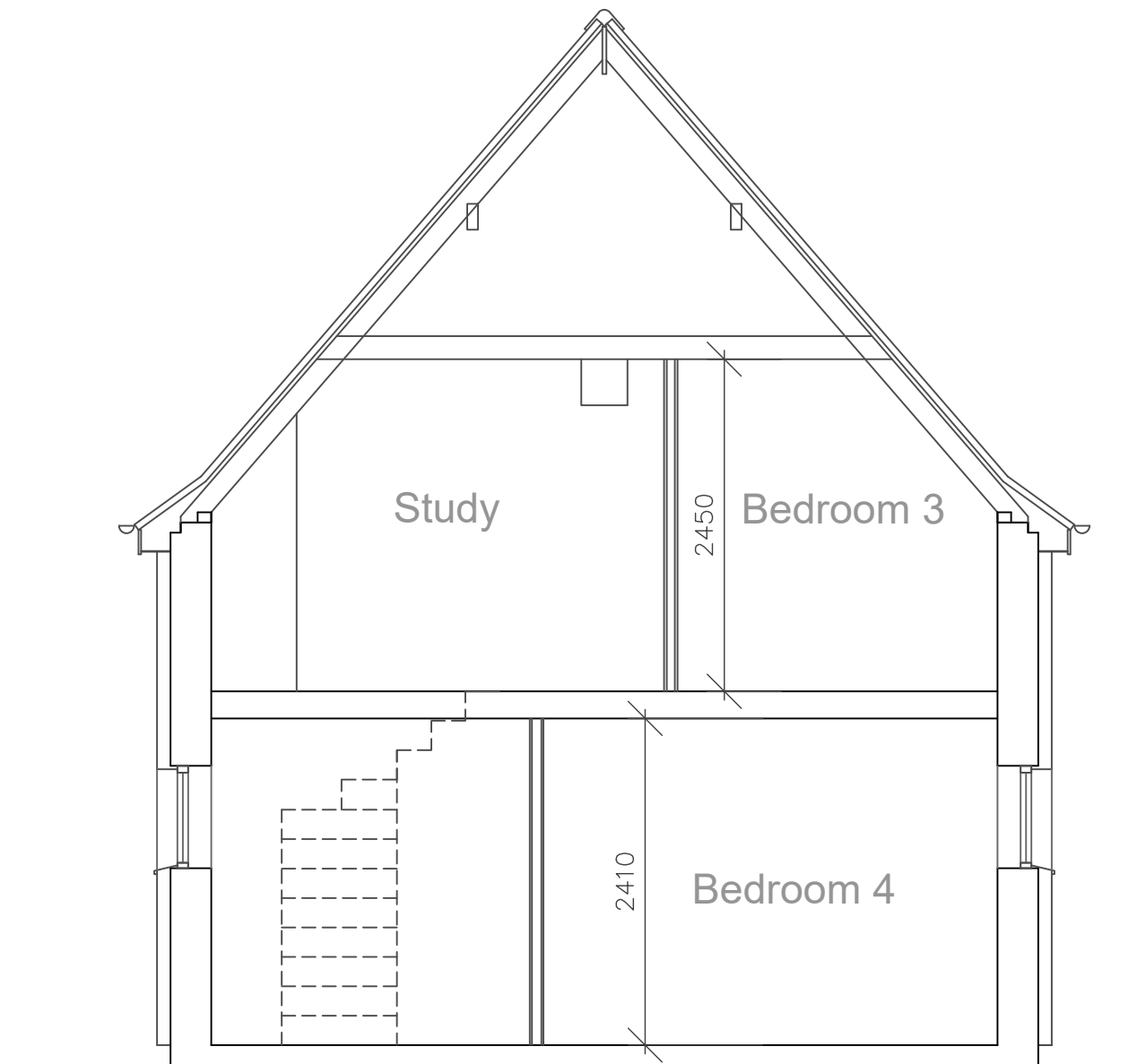
The floor plan illustrates a three-story residential building with the following layout and features:

- Bedroom 4:** Located on the top left, featuring a bed (W17), a window (W16), and a door (D21) leading to the En-suite.
- En-suite:** Adjacent to Bedroom 4, containing a toilet and a window (W3).
- soft play:** A designated area on the top floor, accessible from Bedroom 4.
- Lounge:** A central area on the top floor with a staircase leading down to the middle floor.
- Kitchen / Dining:** Located on the top floor, featuring a dining table and chairs (HD), a kitchen unit (W14), and a door (D23) leading to the middle floor.
- Bedroom 3:** Located on the middle floor, featuring a bed (W11), a window (W10), and a door (D17) leading to the Lounge / Dining area.
- Lounge / Dining:** A central area on the middle floor with a dining table and chairs (HD), a kitchen unit (W7), and a door (D18) leading to the Kitchen.
- Kitchen:** Located on the middle floor, featuring a kitchen unit (W7) and a door (D19) leading to the Lounge.
- toilet:** Located on the middle floor, adjacent to the Lounge / Dining area.
- Bedroom 2:** Located on the bottom floor, featuring a bed (W5), a window (W6), and a door (D20) leading to the Lounge.
- Lounge:** A central area on the bottom floor with a dining table and chairs (HD), a kitchen unit (W6), and a door (D19) leading to the Lounge.
- Kitchen:** Located on the bottom floor, featuring a kitchen unit (W6) and a door (D19) leading to the Lounge.
- toilet:** Located on the bottom floor, adjacent to the Lounge.
- Staircases:** Two staircases are shown, one on the top floor leading down to the middle floor, and another on the middle floor leading down to the bottom floor.
- Ventilation System:** The plan includes various components such as supply vents (SVP), return vents (RWP), and doors (D) for the ventilation system.

PROJECT NO:	DISCIPLINE:	DRG NO:	REV:
5181996	BS	01 - 009	.



PROJECT NO:	DISCIPLINE:	DRG NO:	REV
5181996	BS	01 - 011	.



NOTES

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Cj. - *** *** ***

Civ.

Di.

Div.

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[illegible]

REV	DESCRIPTION	BY	DATE	CHK'D	AUT
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CLIENT:

STOKE-ON-TRENT CITY COUNCIL

PROJECT:
UNITAS - THE SQUARE RESIDENTIAL
CONVERSATION PROJECT
MEIR, STOKE ON TRENT

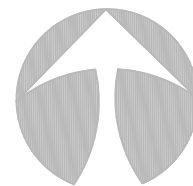
TITLE:
TYPICAL SECTIONS

SCALE:	PAPER SIZE:	DESIGNED:	DRAWN:	CHECKED:	AUTHORIS
1:50	A3	DW	IRW	DW	DW
	OFFICE:	DATE:	DATE:	DATE:	DATE:
	STOKE	April 2019	April 2019	April 2019	April 2019

PROJECT NO:	DISCIPLINE:	DRG NO:	REV:
5181996	BS	01 - 012	.

NOTES

SCALE:	PAPER SIZE:	DESIGNED:	DRAWN:	CHECKED:	AUTHORISED:
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	OFFICE:	DATE:	DATE:	DATE:	DATE:
	STOKE	April 2019	April 2019	April 2019	April 2019
PROJECT NO:		DISCIPLINE:		DRG NO:	
		BS		01 - 013	



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[illegible]

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CONSTRUCTIVE EXPERTISE

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Tel: (01782) 222233
Fax: (01782) 222244

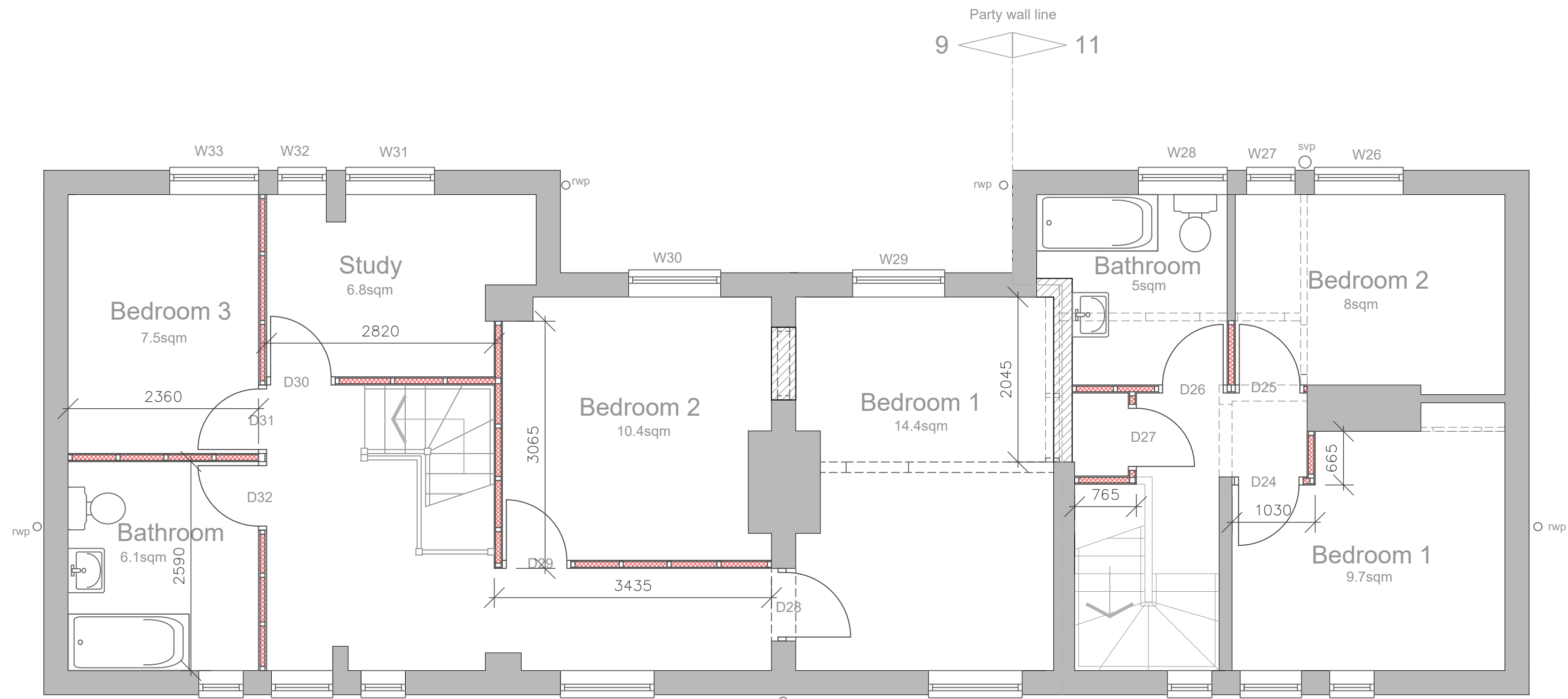
CLIENT:
STOKE-ON-TRENT CITY COUNCIL

PROJECT:
UNITAS - THE SQUARE RESIDENTIAL
CONVERSATION PROJECT
MEIR, STOKE ON TRENT

TITLE:
SITE PLAN

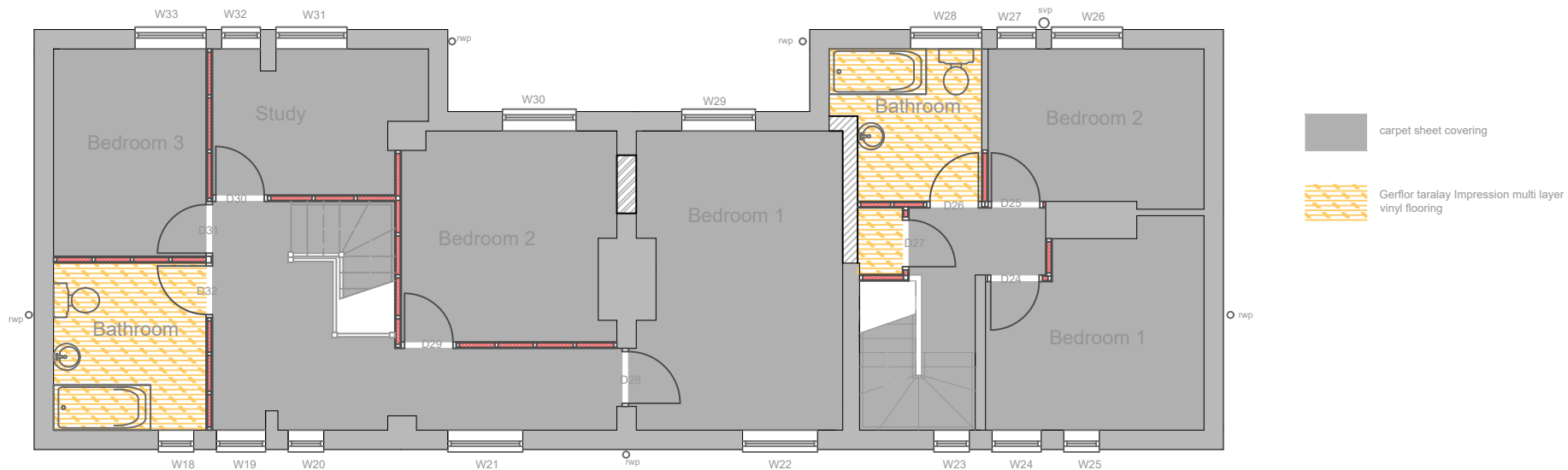
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	STOKE	April 2019	April 2019	April 2019	April 20

PROJECT NO:	DISCIPLINE:	DRG NO:	REV:
	BS	01 - 014	

[illegible]

Ground Floor

[illegible]



The floor plan illustrates a three-story residential building with a central corridor (D20) and a staircase. The layout includes the following rooms and features:

- Bedroom 4:** Located on the left side, featuring a window (W17) and a door (D21).
- En-suite:** Adjacent to Bedroom 4, containing a toilet and a window (W3).
- soft play:** Located between Bedroom 4 and the central Lounge.
- Lounge:** A central living area with a window (W16) and a door (D20).
- Kitchen / Dining:** An orange-colored area adjacent to the central Lounge, featuring a window (W14) and a door (D23).
- Lounge / Dining:** A large grey-colored area on the right side, featuring a window (W11) and a door (D17).
- Kitchen:** A grey-colored area below the Lounge / Dining, featuring a window (W7) and a door (D18).
- toilet:** Located between the Kitchen and the Lounge / Dining, featuring a window (W8) and a door (D17).

The plan also shows numerous windows (W1-W17), doors (D7-D23), and a staircase. The rooms are color-coded: yellow for bedrooms and bathrooms, orange for living and dining areas, and grey for the kitchen and toilet.

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1. DO NOT SCALE FROM THIS DRAWING.
2. ALL MEASUREMENTS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION AND ALL RELEVANT ARCHITECTURAL, ELECTRICAL, MECHANICAL AND STRUCTURAL DRAWINGS.

<p>SAFETY HEALTH AND ENVIRONMENTAL INFORMATION</p> <p>For details of site-wide and general risks, to be read in conjunction with these notes, see the contract documents and, where works are notifiable, the pre-construction information pack issued by the CDM co-ordinator</p> <p>In addition to the risks normally associated with the types of work detailed on this drawing, note the following risks and information:</p>	
<p>CONSTRUCTION</p> <p>Cl. </p> <p>Cii.</p> <p>Ciii.</p> <p>Civ.</p>	
<p>DISMANTLING / DEMOLITION (Future)</p> <p>Di.</p> <p>Dii.</p> <p>Diii.</p> <p>Div.</p>	
<p>It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement</p>	

[illegible]

DESCRIPTION	BY	DATE	CHK'D	AUTH
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FAITHFUL+GOULD
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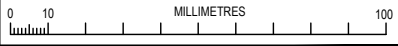
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SUBJECT:
NITAS - THE SQUARE RESIDENTIAL
CONVERSATION PROJECT
LEIR, STOKE ON TRENT

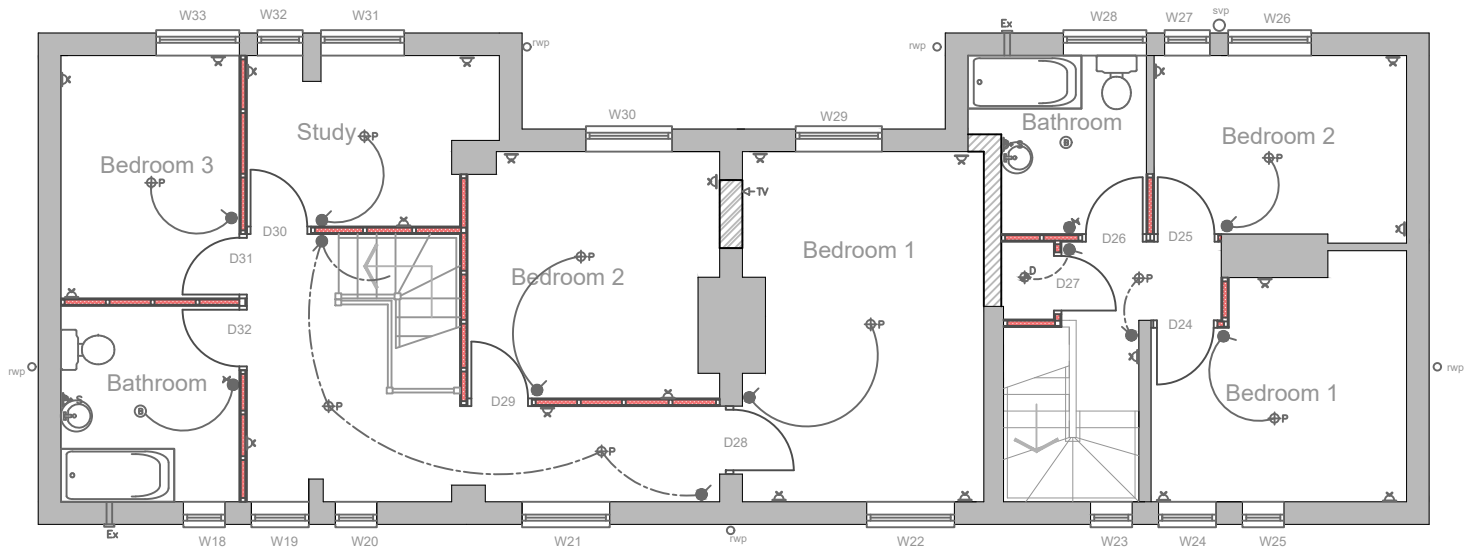
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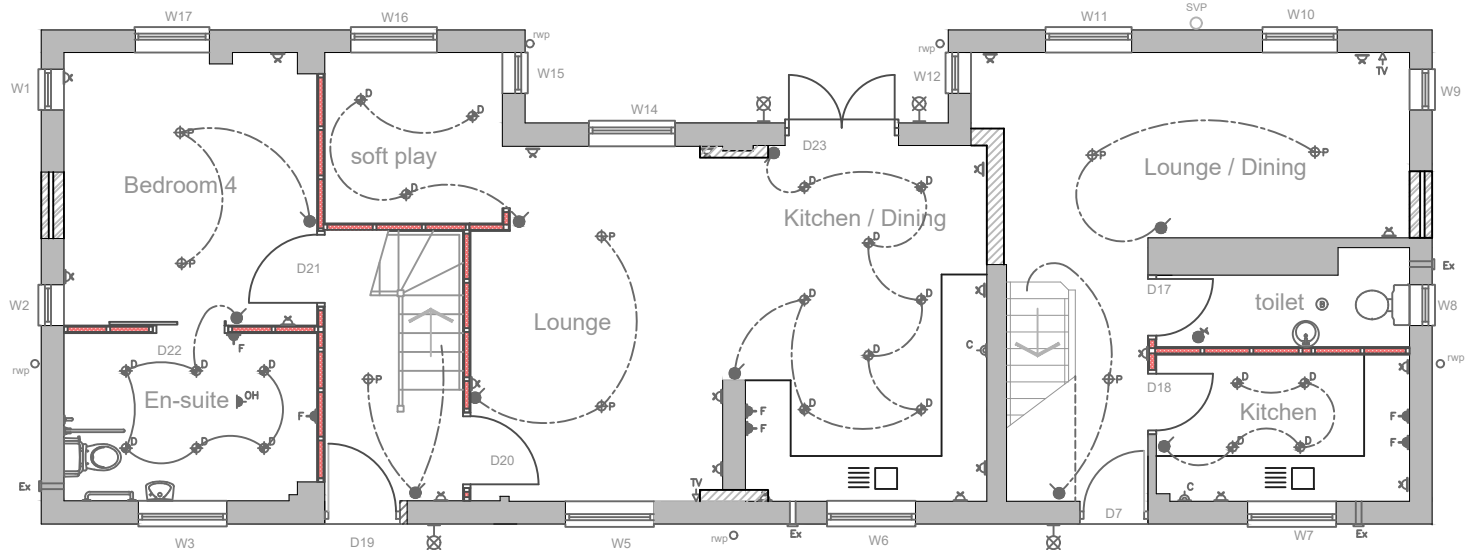
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- NOTES
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First Floor



Ground Floor

ELECTRICAL INSTALLATION

- DOWNLIGHTER
- CEILING PENDANT
- BULKHEAD FITTING
- PULL CORD
- LIGHT SWITCH
- TELEVISION AERIAL POINT
- 13 AMP DOUBLE SWITCHED SOCKET
- SHOWER POINT AND COMBINED LIGHT
- THERMOSTAT
- TELEPHONE POINT
- COOKER POINT
- BOILER POINT
- FUSED SPUR
- FUSED SPUR (Overhead Road)
- WALL LIGHT
- EXTRACT FAN

ELECTRICAL INSTALLATION:
All new electrics to be installed by a credited NICEIC Contractor to the latest I.E.E. addition and amendments.

All electrical fittings/outlets are to be white, unless otherwise specified (sample to be provided for client prior to installation). All to be installed in strict accordance with manufacturer's recommendations. Allow for all back boxes as per manufacturer's recommendations. Sockets and light switches to be strictly fixed at heights agreed with the Client. Provisionally heights of sockets to be 450mm above floor level and light switches to be 1200mm above floor level.

Wiring to be run in the partitions. No wiring is to be surface mounted, or conduit is to be mounted where new works are to be undertaken.

Allow for stripping out/relocating external cables as necessary where conflicting with new work etc. All sockets and switches not shown on drawing all deemed to have been included in the works.

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION	
For details of site-wide and general risks, to be read in conjunction with these notes, see the contract documents and, where works are notifiable, the pre-construction information pack issued by the CDM co-ordinator	
In addition to the risks normally associated with the types of work detailed on this drawing, note the following risks and information:	
CONSTRUCTION	
Cl.	...
Cii.	
Ciii.	
Civ.	
DISMANTLING / DEMOLITION (Future)	
Di.	
Dii.	
Diii.	
Div.	
It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement	

REV	DESCRIPTION	BY	DATE	CHKD	AUTH

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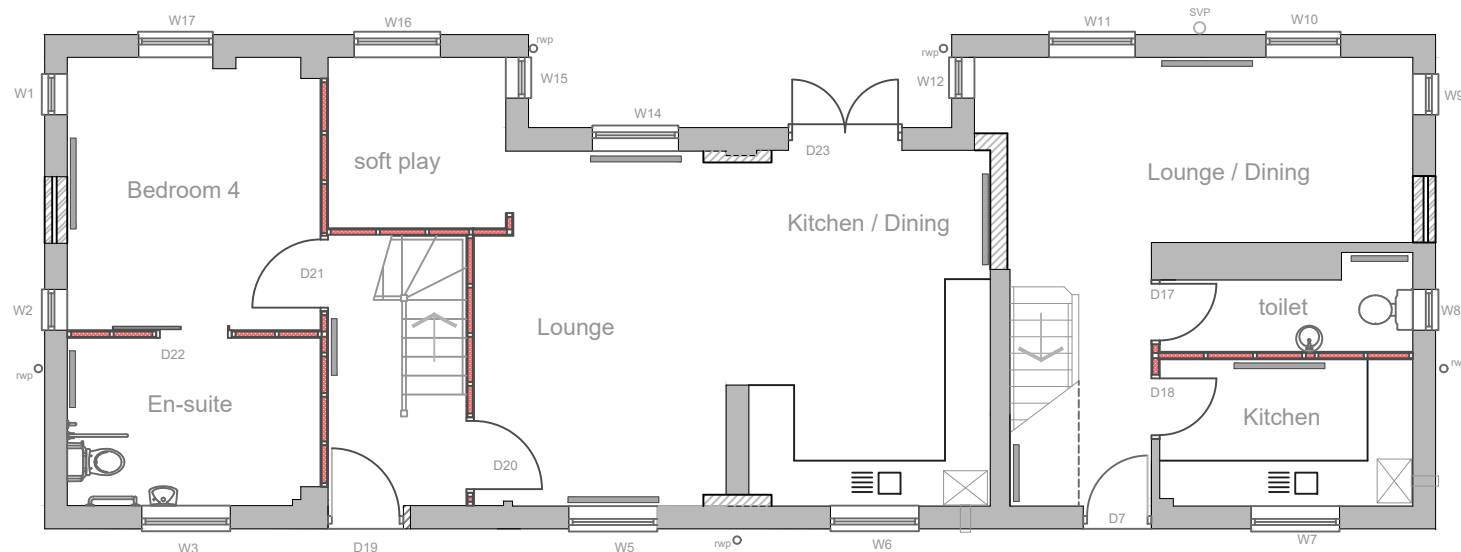
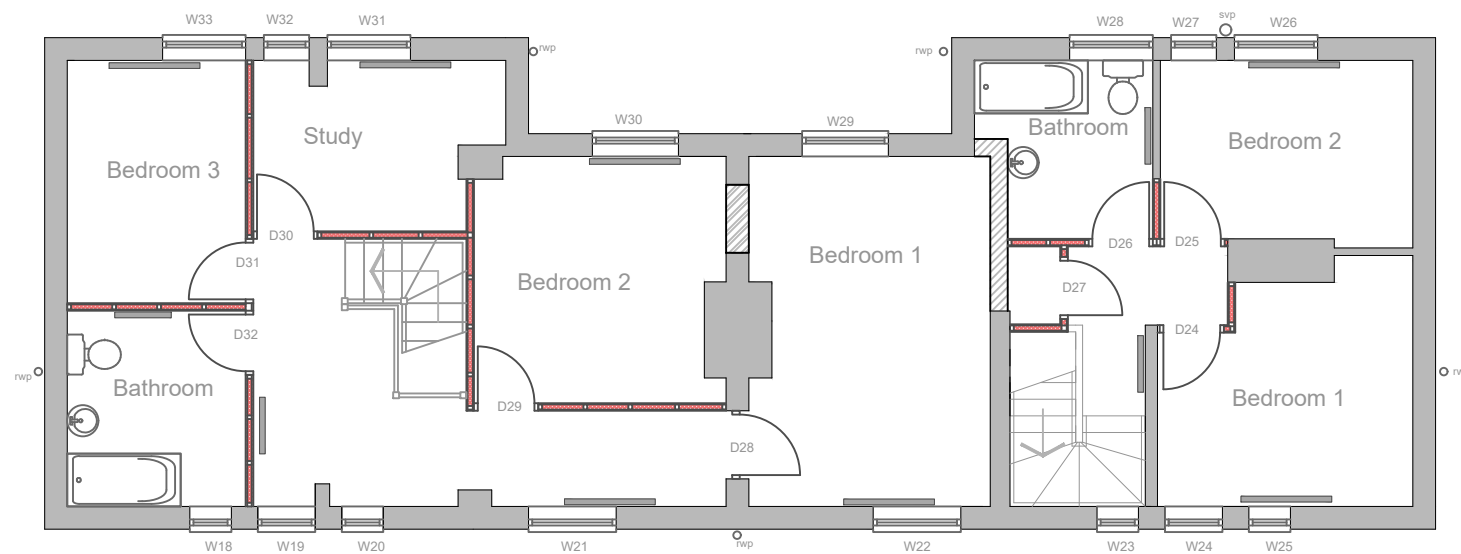
CLIENT:
STOKE-ON-TRENT CITY COUNCIL

PROJECT:
UNITAS - THE SQUARE RESIDENTIAL
CONVERSION PROJECT
MEIR, STOKE ON TRENT

TITLE:
SMALL POWER AND ELECTRICAL LAYOUT

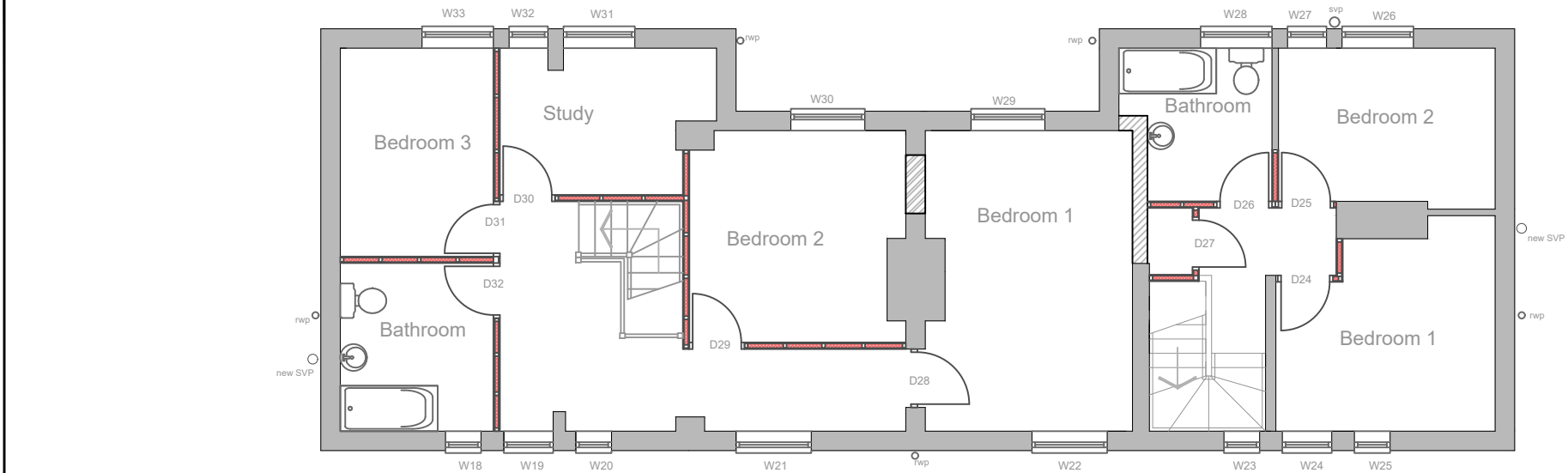
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STOKE	April 2019	April 2019	April 2019	April 2019	April 2019

PROJECT NO: 5181996 / DISCIPLINE: BS / DRG NO: 01 - 017 / REV: .



Ground Floor





PROJECT NO:	DISCIPLINE:	DRG NO:	REV:
5181996	BS	01 - 018	.



The Ground Floor plan shows a residential layout with several rooms and a central staircase. The plan includes the following rooms and features:

- Bedroom 4:** Located in the top left, featuring a window (W17) and a door (D21).
- En-suite:** Adjacent to Bedroom 4, containing a toilet and a sink (W3).
- soft play:** A designated area between Bedroom 4 and the Lounge.
- Lounge:** A central living area with a staircase and a door (D20).
- Kitchen / Dining:** A combined area with a door (D23) leading to the Lounge.
- Lounge / Dining:** A larger living area on the right side, featuring a fireplace and a door (D17).
- Kitchen:** Located at the bottom right, containing a sink (W7) and a door (D18).
- toilet:** A separate toilet room adjacent to the Kitchen.

The plan also shows various windows (W1, W2, W3, W5, W6, W7, W8, W9, W10, W11, W12, W14, W15, W16, W17) and doors (D7, D17, D18, D19, D20, D21, D22, D23). A central staircase is indicated by a triangle with an arrow. The plan is labeled "Ground Floor" at the bottom center. A dashed line with arrows indicates the "new" layout, while solid lines and labels like "existing" and "IC" indicate the current state.

	Inspection Chamber
	Line of existing drainage
	New underground drainage connection
	New gully

<p>SAFETY HEALTH AND ENVIRONMENTAL INFORMATION</p> <p>For details of site-wide and general risks, to be read in conjunction with these notes, see the contract documents and, where works are notifiable, the pre-construction information pack issued by the CDM co-ordinator</p> <p>In addition to the risks normally associated with the types of work detailed on this drawing, note the following risks and information:</p> <p>CONSTRUCTION</p> <p>Cl.</p> <p>Cii.</p> <p>Ciii.</p> <p>Civ.</p> <p>DISMANTLING / DEMOLITION (Future)</p> <p>Di.</p> <p>Dii.</p> <p>Diii.</p> <p>Div.</p> <p>It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement</p>

PROJECT NO:	DISCIPLINE:	DRG NO:	REV:
5181996	BS	01 - 019	.

Appendix B.

B.1. Kitchen Layouts

Appendix C.

C.1. Unitas M&E Standard Specification

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