TENDER DOCUMENTS

For

REFURBISHMENT / CONVERSION WORKS

At

40-46 SWEYN ROAD, MARGATE, CT9 2DH

THANET DISTRICT COUNCIL

POTTER RAPER PARTNERSHIP
Duncan House
Burnhill Road
Beckenham
Kent BR3 3LA

Job Nr: B7341
March 2016

40-46 SWEYN ROAD
MARGATE, KENT, CT9 2BD
B7341

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ANNEXE 1

INVITATION TO TENDER

TENDER FOR

REHABILITATION AND CONVERSION OF

40-46 SWEYN ROAD, CLIFTONVILLE

TDC#482

Invitation to Tender (ITT)

Thanet District Council

INVITATION TO TENDER FOR
REHABILITATION AND CONVERSION OF

40-46 SWEYN ROAD, CLIFTONVILLE

SUMMARY INSTRUCTIONS AND DETAILS OF CONTRACT

ITEM	CONTRACT DETAILS
Contract Description:	Construction Contract – The rehabilitation and conversion of an existing fire damaged residential property in to 2 x 4 Bedroom Houses, 2 x 2 Bedroom Flats and 2 x 3 Bedroom Maisonettes. The form of contract is the JCT Intermediate Building Contract with Contractor's Design 2011 incorporating amendment 1 (CDM Regulations, 2015) and Public Sector Supplement document and includes Thanet District Council's Standard Clauses.
Period of Contract:	27 June 2016 to 12 May 2017 (inclusive of 2 week Christmas break)
Appointed Representative:	Any queries must be in writing by email, addressed to: James Dutton - Potter Raper Partnership e-mail: james.dutton@prp.gb.com **All queries must be received by no later 1st April 2016, being well before the last date for Submission of Tenders**
Submission instructions:	Tenderers are requested to supply one bound and one unbound copy of their tender documents plus two electric copies on disc.
Tenders to be sent to:	It is the responsibility of tenderers to ensure that their tender is delivered to **The Democratic Services & Scrutiny Manager, Thanet District Council, Council Offices, PO Box 9, Cecil Street, Margate, Kent. CT9 1XZ** not later than the return deadline: 2pm, 15th April 2016. The Council will not consider tenders received after that time.
Date/time for Tender return:	**NO LATER THAN:** 2pm, 15th April 2016.
Packaging:	Tenders must be marked only as shown on return label provided as part of the ITT **NOT TO BE OPENED - Tender Documents Ref TDC#482** **Construction Contract –** The rehabilitation and conversion of an existing fire damaged residential property in to 2 x 4 Bedroom Houses, 2 x 2 Bedroom Flats and 2 x 3 Bedroom Maisonettes. Democratic Services and Scrutiny Manager, Thanet District Council, Council Offices, PO Box 9, Cecil Street, Margate, Kent CT9 1XZ Closing date/time: **2pm, 15 April 2016** **IMPORTANT NOTE:** The packaging must not bear any sign or reference which might indicate the identity of the Tenderer or distinguishing marks as to company origin. Any such markings will render the tender to be disqualified prior to opening.

Timetable

This timetable is **indicative** only. The Council reserves the right to change it at its discretion.

Stage	Date(s)/time
Issue of Invitation to Tender	14 March 2016
Submission of Tenders	By 2pm, 15 April 2016
Evaluation of Tenders	Week beginning 18 April 2016
Notification of result of evaluation	29 April 2016
Expected date of award of Contract(s)	26 May 2016
Contract commencement	27 June 2016

CHECKLIST FOR TENDERERS

Failure to provide all of the items in the checklist may cause your Tender to be non-compliant and not be considered.

No	Item	Included in Tender?
1.	All information requested in Section 5 (located on pg. 8)	
2.	Pricing Schedule (Schedule 3 – located on pg. 17)	
3.	Form of Tender (Schedule 4 – located on pg. 18)	
4.	Anti-Collusion Certificate (Schedule 5 – located on pg. 19)	
5.	Parent Company Guarantee (where applicable)	
6..	Qualitative Assessment (located on pg. 22)	
7.	Suitability Assessment Questionnaire (located in Appendix A)	

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PART 1

Schedules:

Appendices

IMPORTANT NOTICE

This Invitation to Tender ("ITT") is issued by Thanet District Council (the "Council") to provide services for the rehabilitation and conversion of an existing fire damaged residential property in to 2 x 4 Bedroom Houses, 2 x 2 Bedroom Flats and 2 x 3 Bedroom Maisonettes.

The contents of this ITT and of any other documentation sent to you in respect of this tender process are provided on the basis that they remain the property of the Council and must be treated as confidential in perpetuity. If you are unable or unwilling to comply with this requirement you are required to destroy this ITT and all associated documents immediately and not to retain any electronic or paper copies.

No Tenderer will undertake any publicity activities with any part of the media in relation to the Contract or this ITT process without the prior written agreement of the Council, including agreement on the format and content of any publicity.

This ITT is made available in good faith. No warranty is given as to the accuracy or completeness of the information contained in it and any liability or any inaccuracy or incompleteness is therefore expressly disclaimed by the Council and its advisers.

The Council reserves the right to cancel the tender process at any point. The Council is not liable for any costs resulting from any cancellation of this tender process nor for any other costs incurred by those tendering for this Contract.

You are deemed to understand fully the processes that the Council is required to follow under the Council's Contract Standing Orders which can be viewed at www.thanet.gov.uk

1. **BACKGROUND**

1.0 Thanet District Council is seeking a contractor to provide works/services for the rehabilitation and conversion of an existing fire damaged residential property in to 2 x 4 Bedroom Houses, 2 x 2 Bedroom Flats and 2 x 3 Bedroom Maisonettes.

1.1 Further details of the Council's needs under the Contract and other relevant information are provided in the Schedule of Works and Drawings at Appendix B & Contract Particulars at Schedule 1 and Special Conditions at Schedule 2.

1.2 If you have any questions or require any clarifications, please contact in writing via e-mail the appointed representative, as detailed in the Summary Instructions.

1.3 Other than the persons identified above, no Council employee or member of the Council or any appointed 3rd party has the authority to give any information or make any representation (express or implied) in relation to this ITT or any other matter relating to the Contract.

1.4 Please note that the Council's responses to any queries or clarification requests may, at the Council's discretion, be circulated to all Tenderers.

1.5 The Council reserves the right to issue supplementary documentation at any time during the tendering process to clarify any issue or amend any aspect of the ITT. All such further documentation that may be issued shall be deemed to form part of the ITT and shall supplement and/or supersede any part of the ITT to the extent indicated.

1.6 Tenderers must obtain for themselves at their own expense all information necessary for the preparation of their Tenders.

1.7 Tenderers are recommended to undertake a site inspection in order to satisfy themselves with site requirements. Site visits will be subject to agreed appointments which are to be made through the appointed representative, as detailed in the Summary Instructions.

1.8 Under the Contract the Council will require compliance with its policies. Tenderers are advised to satisfy themselves that they understand all of the requirements of the Contract before submitting their Tender.

1.9 The Tender must be received in accordance with the relevant instructions no later than the time and date indicated.

2. CONDITIONS OF TENDER

2.1 Tenders must be completed in the English language or a full English translation provided at no cost to the Council.

2.2 Tenders must provide responses referring back to the numbering format as set out in Section 5 of this ITT. Tenderers must also complete and submit the required forms of pricing schedule, form of tender and anti collusion documentation as included within Schedules 3, 4 & 5 respectively of this ITT as part of the submission of tender.

2.3 Only one Tender is permitted from each Tenderer. In the event that more than one is submitted by a Tenderer the one with the latest time of submission will be evaluated and the other(s) disregarded.

2.4 The Tender (including price) should remain valid for a minimum period of 90 days from the last date of submission of tenders.

2.5 The Tender should not be qualified in any way.

2.6 Any signatures must be made by a person who is authorised to commit the tenderer to the Contract.

2.7 Your full registered business/name and main office address must also be provided on all documents.

2.8 Abnormally Low Tenders

Where the pricing of a Tender is abnormally low the Council reserves the right to reject the Tender in accordance with the requirements for further investigation under The Public Contracts Regulations 2015.

2.9 Parent Company Guarantee

The Council reserves the right to require (where applicable) the parent company of the successful Tenderer to guarantee the performance of the Contract in the form of that guarantee set out in Schedule 6. Tenderers are requested to confirm their acceptance of the Deed of Guarantee when submitting their tender for works provision.

3 CONTRACT DOCUMENTS

3.1 Any resulting Contract will include a legal agreement executed as a deed, to be completed by the parties in the form set out in JCT Intermediate Building Contract with Contractor's Design 2011 incorporating amendment 1 (CDM Regulations 2015) Public Sector Supplement Documentation together with (inter alia) the Schedule of Works and Drawings Appendix B, Contract Particulars, Recitals, Articles (Schedule 1) Special Conditions of Contract (Schedule 2), the completed tender documentation and the Council's written acceptance of the successful tender and will be subject to English law. The successful tenderer shall provide the signed legal agreement (and any required guarantee) to the Council within 10 days of receipt of confirmation of contract award.

3.2 This procurement must comply with the Council's Contract Standing Orders.

Tenderers are not expected to ask for variances to any Terms and Conditions relevant to the contract. However, if a tenderer has a variant bid whereby they consider the Council can save money through an alternative they should submit this as well rather than instead of the requested offer,and they may be accepted at the sole discretion of the council and will be considered to be a variant bid.

4 TENDER EVALUATION AND AWARD CRITERIA

Tenders will be evaluated on 70%/30% price/quality split. The tenderer will also be required to complete the Suitability Assessment Questionnaire as per Appendix 'A', the results of which will impact upon the overall tender decision.

The Council does not undertake to accept the lowest or any Tender and reserves the right to accept the whole or any part of any Tender submitted.

Each Tender will be checked initially for compliance with all requirements of the ITT.

During the evaluation period, the Council reserves the right to seek clarification in writing from the Tenderers, to assist it in its consideration of their Tenders.

The Council may decide to interview Tenderers, to assist its tendering process, and Tenderers will be notified in due course.

5. INFORMATION REQUIRED

a. Tender information Tenderers

are required to include:

i. Proof of insurance as required:

Professional Indemnity - £2 million

Employers Liability - £10 million

Public Liability - £10 million

ii. A management structure and principal point of contact for the Council to be Contract Manager and detail of service continuity systems including information on how the contract and performance will be monitored (please ensure this is referenced appropriately within submission Section 5 a. ii);

b. Pricing

i. Tenderers must complete the Pricing Schedule set out in Schedule 3 to provide all of the obligations under the Contract.

ii. All Prices shall be stated in pounds sterling and exclusive of VAT.

iii. Tenderers must also indicate all other costs that will be associated with the contract. No claim for additional payment will be considered for items that have not been specified.

iv. All rates and prices tendered as contained in the Schedule of Works should also be contained within the pricing Schedule 3.

c. Qualitative Response

i. Tenderers are referred to Schedule 7 of this document for the qualitative response required for submission with this tender.

ii. Tenderers must also complete the 'Suitability Assessment Questionnaire' contained within Appendix 'A', which will be marked on a pass/fail basis.

6. POST CONTRACT MONITORING

The successful Tenderer will be expected to ensure service continuity and actively monitor performance (as detailed within 5 a [ii]) and collaborate with the Council over the Contract Period to achieve continuous improvement in the quality and delivery of the Contract in accordance with the Council's obligations under Part I of The Local Government Act 1999. Tenderers are considered to have confirmed their willingness to participate in this activity in their Tender.

7 ENVIRONMENTAL ISSUES

a. The Council is committed to the protection of the environment and the promotion of sustainable environmental development.

b. Tenders should indicate whether the Tenderer would be willing to work with the Council regarding any environmental issues the Council considers relevant, comply with contractual obligations and carry out any reasonable requests to ensure the protection of the environment and promotion of sustainable development throughout the Contract Period.

c. Tenderers should note the various obligations contained within the Contract which will ensure that the successful Tenderer will provide the Contract in a non-detrimental manner to the environment.

8 FREEDOM OF INFORMATION ACT AND ENVIRONMENTAL INFORMATION STATEMENT

a. The Council is subject to The Freedom of Information Act 2000 ("Act") and The Environmental Information Regulations 2004 ("EIR").

b. As part of the Council's duties under the Act or EIR, it may be required to disclose information concerning the procurement process or the Contract to anyone who makes a reasonable request. Information stating company/supplier's name and value of contract payments in excess of £500 is routinely published by the Council each month on its web pages in accordance with Government requirements.

c. If Tenderers consider that any of the information provided in their Tender is commercially sensitive (meaning it could reasonably cause prejudice to the organisation if disclosed to a third party) then it should be clearly marked as Commercially Confidential - "**Not for disclosure to third parties"** together with valid reasons in support of the information being exempt from disclosure under the Act and the EIR.

d. The Council will endeavor to consult with Tenderers and have regard to comments and any objections before it releases any information to a third party under the Act or the EIR. However the Council shall be entitled to determine in its absolute discretion whether any information is exempt from the Act and/or the EIR, or is to be disclosed in response to a request of information. The Council must make its decision on disclosure in accordance with the provisions of the Act or the EIR and can only withhold information if it is covered by an exemption from disclosure under the Act or the EIR.

e. The Council will not be held liable for any loss or prejudice caused by the disclosure of information that;

i. has not been clearly marked as Commercially Confidential - "Not for disclosure to third parties" with supporting reasons (referring to the relevant category of exemption under the Act or EIR where possible); or

ii. does not fall into a category of information that is exempt from disclosure under the Act or EIR (for example, a trade secret or would be likely to prejudice the commercial interests of any person); and

iii. in cases where there is no absolute statutory duty to withhold information, then notwithstanding the previous clauses, in circumstances where it is in the public interest to disclose any such information.

9. PAYMENT & V. A. T.

Invoicing and payment will be as per the agreed schedule of payments as indicated in JCT Intermediate Building Contract with Contractor's Design 2011. Invoices submitted for payment to the Council shall bear the Council's official purchase order number and be accompanied by a completed work/service schedule. Invoices can be sent electronically to: tdcsuppliers@thanet.gov.uk or posted hard copy addressed to Payments Dept., Thanet District Council, Po Box 9, Cecil Street, Margate, Kent CT9 1XZ.

SCHEDULE 1

JCT CONTRACT PARTICULARS, RECITALS & ARTICLES

Refer to bill number 1 (Preliminaries) from the main tender documents to review the JCT contract particulars, recitals and articles.

The Form of Contract shall be the JCT Intermediate Building Contract With Contractor's Design (2011 Edition) including (inter alia) Amendment 1 (CDM Regulations) (March 2015) and Public Sector Supplement (2011).

SCHEDULE 2

SPECIAL CONDITIONS OF CONTRACT

The foreword below forms part of the conditions of contract.

FOREWORD

The conditions of contract that Thanet District Council will be applying to the Works are those contained within the JCT Intermediate Building Contract with Contractor's Design 2011 incorporating amendment 1 (2015), Public Sector supplement and Thanet District Council's (seven) standard clauses set out below.

Tenderers are required to familiarise themselves with the model form of contract prior to tender submission, a copy of which will be appended to the contract at time of award. The model form of agreement is available to purchase from the stockists listed on the following website:
http://www.jctltd.co.uk

In the event of any conflict between the provisions of the JCT Conditions and the following standard clauses then the provisions of said standard clauses shall prevail.

Thanet District Council – Standard Clauses

1. Anti-Bribery, Fraud & Corruption

The Council may cancel the contract and recover from the Contractor the amount of any loss resulting from such cancellation if the Contractor shall have offered or given or agreed to give any person any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any action in relation to the obtaining or execution of the contract or any other contract with the Council or for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Council or if the like acts shall have been done by any person employed by it or acting on its behalf (whether with or without the knowledge of the Contractor) or if in relation to any contract with the Council the Contractor or any person employed by him/her or acting on his/her behalf shall have committed any offence under the Bribery Act 2010 or shall have given any fee or reward the receipt of which is an offence under Section 117(2) Local Government Act 1972. The Council's policies can be viewed at: http://thanet.gov.uk/publications/finance/anti-fraud-and-corruption-policy/

2. Assignment and Sub-Letting

The Contractor shall be prohibited from transferring, assigning sub-contracting or sub-letting, directly or indirectly, to any person or persons whatever, the whole or any portion of the contract without the written permission of the Council. No sub-contracting shall relieve the Contractor from the obligations of the Contract or from the obligation to actively supervise the works/services during their progress. All actions taken by an approved Sub-Contractor in connection with the carrying out of any work under the Contract will be deemed to be the actions of the Contractor as defined in this Contract.

3. Health & Safety and Equal Opportunity

Without prejudice to any other term or condition of the contract the Contractor shall comply in all respects with the provisions of any statute, statutory instrument, rule or regulation in force from time to time relating to:

health and safety issues relevant or applicable to the goods, works and/or services to be provided to the Council hereunder and shall bear the penalty for any contravention of the standard provisions relating to safety; and/or

Equal opportunities. In particular, the Council requires the Contractor to be committed to a policy of treating all its employees and job applicants equally. No employee or potential employee shall receive less favourable treatment or consideration on the grounds of race colour religion or belief nationality ethnic or national origins sexual orientation gender re-assignment age disability marital status or part-time status or be disadvantaged by any conditions of employment that cannot be justified as reasonably necessary on operational grounds. http://thanet.gov.uk/your-services/equality-and-diversity/where-is-your-equality-policy/equality-policy-and-plan

4. Freedom of Information

For the purposes of this clause

"FOI Legislation" means the Freedom of Information Act 2000, all regulations made under it and the Environmental Information Regulations 2004 and any amendment or re-enactment of any of them; and any guidance issued by the Information Commissioner, the Ministry of Justice or the department for Environment Food and Rural Affairs (including in each case its successors or assigns) in relation to such legislation;

"Information" has the meaning given under Section 84 of the Freedom of Information Act 2000.

"Information Request" means a request for any Information under the FOI Legislation.

The Contractor acknowledges that the Council:

is subject to the FOI Legislation and agrees to assist and co-operate with the Council (at the Contractor's expense) to enable the Council to comply with its obligations under the FOI Legislation; and

may be obliged under the FOI Legislation to disclose Information without consulting or obtaining consent from the Contractor.

Without prejudice to the generality of the foregoing, the Contractor shall and shall procure that its sub-contractors (if any) shall:

transfer to the Authorised Officer (or such other person as may be notified by the Council to the Contractor) each Information Request relevant to the Contract or the Services that it or they (as the case may be) receive as soon as practicable and in any event within two working days of receiving such Information Request; and

in relation to Information held by the Contractor or in its possession or power, provide the Council with details about and/or copies of all such Information that the Council requests and such details and/or copies shall be provided within five working days of a request from the Council (or such other period as the Council may reasonably specify), and in such forms as the Council may reasonably specify.

The Council shall be responsible for determining at its absolute discretion whether Information is exempt information under the FOI Legislation and for determining what Information will be disclosed in response to an Information Request in accordance with the FOI Legislation. In no event shall the Contractor respond directly to an Information Request unless expressly authorized to do so by the Council.

The Contractor shall ensure that all Information produced in the course of the Contract or relating to the Contract is retained for disclosure and shall permit the Council to inspect such records as requested from time to time.

5. Conflict of Interest

5.1 The Contractor shall ensure that there is no conflict of interest as to be likely to prejudice his independence and objectivity in performing the Contract and undertakes that upon becoming aware of any such conflict of interest during the performance of the Contract (whether the conflict existed before the award of the Contract or arises during its performance) he shall immediately notify the Council in writing of the same, giving particulars of its nature and the circumstances in which it exists or arises and shall furnish such further information as the Council may reasonably require.

5.2 Where the Council is of the opinion that the conflict of interest notified to it under Clause5.1 above is capable of being avoided or removed, the Council may require the Contractor to take such steps as will, in its opinion, avoid, or as the case may be, remove the conflict and:

5.2.1 if the Contractor fails to comply with the Council's requirements in this respect;

or

5.2.2 if, in the opinion of the Council, compliance does not avoid or remove the conflict, the Council may determine the Contract and recover from the Contractor the amount of any loss resulting from such determination.

5.3 Where the Council is of the opinion that the conflict of interest which existed at the time of the award of the Contract could have been discovered with the application by the Contractor of due diligence and ought to have been disclosed as required by the tender documents pertaining to it, the Council may determine the Contract immediately for breach of a fundamental condition and, without prejudice to any other rights, recover from the Contractor the amount of any loss resulting from such determination.

5.4 In the event that the contractor enters into any sub-contract in connection with this Contract it shall impose obligations on its sub-contractors in terms substantially similar to those imposed on it pursuant to the preceding sub-clauses and shall provide evidence of its compliance to the Employer upon written request.

6. Prompt Payment of Invoices

6.1 Where the Contractor submits an invoice to the Council for the supply of goods, services and/or works as appropriate the Council will consider and verify that invoice in a timely fashion.

6.2 The Council shall pay the Contractor any sums due under such invoice no later than a period of 30 days from the date on which the Council has determined that the invoice is valid and undisputed.

6.3 Where the Council fails to comply with clause 6.1 and there is undue delay in considering and verifying the invoice, the invoice shall be regarded as valid and undisputed for the purposes of clause 6.2 after reasonable time has passed.

6.4. Where the Contractor enters into a sub-contract, the Contractor shall include in that sub-contract:

a) provisions having the same effect as clauses 6.1 – 6.3 of this clause; and
b) a provision requiring the counterparty to that sub-contract to include within any sub-contract which it awards provisions having the same effect as clauses 6.1 – 6.4 of this clause.

6.5 In clause 6.4, "Sub-Contract" means a contract between two or more suppliers, at any stage of remoteness from the Council in a subcontracting chain, made wholly or substantially for the purpose of performing (or contributing to the performance of) the whole or any part of this Agreement.

7 . Child Protection and Safeguarding Children

Where the Contractor is engaged by the Council under a contract in the performance of which the Contractor its employees or sub-contractors are likely to come into contact with children or young people then, unless bound to comply with its own Child Protection Policy (which shall be no less onerous than the Council's), the Contractor shall comply with the terms of the Council's Child Protection Policy current at the time and shall cause its employees and sub-contractors to do likewise, throughout the duration of the contract.

A copy of the Council's current Child Protection Policy may be viewed at http://thanet.gov.uk/your-services/child-protection/child-protection-policy-statement/child-protection-and-safeguarding-children-policy-statement and includes (without limitation) a requirement for contractors to undertake DBS checks of all employees that work with children and vulnerable adults as part of their normal duties

SCHEDULE 3:

PRICING SCHEDULE

All items must be completed otherwise the Tender will be void.

CONTRACT:
The rehabilitation and conversion of an existing fire damaged residential property in to 2 x 4 Bedroom Houses, 2 x 2 Bedroom Flats and 2 x 3 Bedroom Maisonettes.

EMPLOYER:
Thanet District Council

Having read the Conditions of Contract and Schedule of Works for the execution of the above named works, and having examined the site and being aware of all conditions under which the works will be carried out I/we offer to supply and deliver materials, provide and maintain plant and execute the works in conformity with the said Conditions and Schedule of Works as follows:-

1.00	Bill Nr 1 - Preliminaries.....	£……
2.00	Bill Nr 3 – Schedule of Works……..….....	£……
TOTAL		£……
PROVISIONAL ASSESSMENT OF VAT		£……

We agree to start and complete the project within the time stated. This tender remains open for acceptance for 90 days from the last return date for tenders.

The rates which will apply for day work are:

All tradesmen £ per hour

Labourer £ per hour

Percentage additions will apply as follows:

P.C. Sums %

Materials %

Plant %

Signed:.....Date.....2016

Name of Company Tendering ……

Date of Tender ……

Signature ……

SCHEDULE 4:

FORM OF TENDER

Having carefully examined the subject Invitation to Tender dated March **2016** and the documents detailed therein:

We confirm that we have fully satisfied ourselves as to the nature of the requirements of the works required at 40-46 Sweyn Road as included within the tender documents dated March 2016.

We hereby offer to complete the works in accordance with your Invitation to Tender and its enclosures including :

1. Instructions to Tenderers
2. Form of Tender
3. Completed Pricing Schedule
4. Completed Anti-Collusion Certificate
5. Parent Company Guarantee (where applicable)

In the event that our Tender is accepted we undertake to execute a formal contract with the JCT Intermediate Building Contract with Contractors Design embodying all of the terms and conditions contained within this offer. Unless and until a formal agreement is executed, this Tender together with the written acceptance shall constitute a binding Contract between us.

We agree to abide by our Tender for a period of 90 days fixed from the lodgement date of tenders, and it shall be binding upon us at any time before expiration of that period.

We understand that you are not bound to accept the lowest or any Tender received, nor assign a reason for the rejection of any Tender. We accept that any costs incurred in Tender preparation are for our own account.

We understand that this shall be deemed to be our only and final offer, and unsolicited re-tenders shall not be considered.

We understand that if our Tender is accepted we shall be reimbursed for the works in accordance with the terms and conditions of the Contract to be executed between us.

Dated this…….....…….day of ……..2016

Signature……

Name and Position in Company……..

Full name and Address of Company……..

……...

Telephone no…….....

Email address.....

SCHEDULE 5:

ANTI-COLLUSION CERTIFICATE

1. We certify that:

   (i) This tender is a bona-fide tender;

   (ii) 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;

   (iii) We have not and we undertake that we will not before the award of any contract for the Works: - (a) communicate to any person other than the person calling for this tender or a person duly

   (a) authorised by him the details of the tender or proposed tender, except where the disclosure, in confidence, of the details of the tender was necessary to obtain insurance premium quotations required for the preparation of the tender;

   (b) enter into any agreement or arrangement with any person that he shall refrain from tendering, that he will withdraw any tender once offered or vary the details of any tender to be submitted;

   (c) pay, give or offer to pay or give any sum of money, inducement or other 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 Works any act or thing of the sort described at (a) or (b) above.

2. We further certify that the principles described in paragraphs 1(iii), (a), (b) and (c) above have been, or will be, brought to the attention of all subcontractors, suppliers and associated companies providing Works or materials connected with the tender and any contract entered into with such sub-contractors, suppliers or associated companies will be made on the basis of compliance with the above principles by all parties.

3. In this certificate, the word “individuals” includes any individuals and any body or association, corporate or unincorporated; “any agreement or arrangement” includes any transaction, formal or informal and whether legally binding or not; and “the Works” means the Goods, Works and/or Services in relation to which this tender is made.

Dated this _____day of _____20 ____

Signature _____in the capacity of _____

Duly authorised to certify the contents of this Anti-Collusion Certificate for and on behalf of:

_____

Postal Address

_____

Telephone No:

SCHEDULE 6:

THANET DISTRICT COUNCIL

PARENT COMPANY - FORM OF GUARANTEE

THIS AGREEMENT is made the day of BETWEEN [(Co.No.)] whose registered office is at [ ] (hereinafter called 'the Parent Company') of the one part and THANET DISTRICT COUNCIL of P.O.Box 9 Cecil Street, Margate, Kent, CT9 1XZ (hereinafter called 'the Council') of the other part

WHEREAS:

(1) This Agreement is supplementary to a Contract (hereinafter called 'the Contract') dated the[ ] and made between [(Co.No.)] (hereinafter called 'the Contractor') of the one part and the Council of the other part whereby the Contractor agreed and undertook to carry out the rehabilitation and conversion and of an existing fire damaged residential property in to 2 x 4 Bedroom Houses, 2 x 2 Bedroom Flats and 2 x 3 Bedroom Maisonettes in accordance with the Contract

(2) The Parent Company has agreed to indemnify the Council in manner hereinafter appearing NOW THE PARENT COMPANY HEREBY AGREES with the Council as follows:

1. IF the Contractor shall in any respect fail to execute the Contract or commit any breach of its obligations there under for whatever reason then the Parent Company will indemnify the Council against all losses damages costs and expenses which may be incurred by them by reason of any default on the part of the Contractor in performing and observing the agreements and provisions on its part contained in the Contract

2. IT IS FURTHER AGREED AND DECLARED that in the event of this indemnity coming into force then the Parent Company will have the option of completing the Contractor's obligations itself or of appointing another contractor to do so after consultation with the Council as to the identity of such other contractor and obtaining the consent of the Council which shall not be unreasonably withheld or delayed

3. IF any questions or dispute shall arise as to the amount of any losses damages costs and expenses due to the Council hereunder or pursuant hereto the amount thereof shall be determined by an arbitrator (who shall be deemed to be acting as an expert and not as an arbitrator) to be agreed upon by the parties hereto or in default of agreement to be nominated by the President or a Vice-President of the Chartered Institute of Arbitrators for the time being whose decision shall be final The fees for the arbitrator shall be shared equally between the Council and the Parent Company

4. THE Parent Company shall not be discharged or released from this indemnity by any alteration in the obligations undertaken by the Contractor or by any forbearance whether as to payment time performance or otherwise on the part of the Council

IN WITNESS whereof the Parent Company has caused this Agreement to be executed as a deed the day and year first before written

SIGNED AND DELIVERED AS A DEED by

[ ] acting by a director and its Company Secretary or two directors:

Director

Director/Co.Secretary

SCHEDULE 7:

Qualitative Evaluation

The qualitative element of this tender will carry a weighting of 30% of the overall assessment. Each question will be scored using the scale 0-4 and the following weighting applied:

(Weighting/maximum score) x score received.

For example if the weighting is 8% and the maximum score is 4 and the score received is 2, the weighted score would be (8/4) x 2 = 4

Each weighted score will be totalled to provide a total weighted score. This figure will then be multiplied by 30% to achieve the Final Weighted Score for Quality.

Any clarification interview required shall be used to clarify and ratify the information provided within the written schedules.

The scoring principles listed below will be used:

0 **Very poor:** the response is significantly below what would be expected because of one or all of the following: the response indicates a significant lack of experience and understanding relating to the requirements and the response fails to meet the requirement.

1 **Poor:** (meets some of the requirement). The response meets some elements of the requirements but gives concern in a number of significant areas. There is at least one significant issue that needs considerable attention and experience does not demonstrate competence or understanding. The response is light and unconvincing.

2 **Satisfactory:** (meets most of the requirements) The response meets most of the requirements but there is at least one significant issue of concern or several smaller ones. The response therefore shows a basic experience and understanding of the requirements. Some areas of concern that require attention.

3 **Good** (meets the requirements) The response broadly meets what is expected for the criteria. There are no significant areas of concern, although there maybe limited minor issues that need further exploration or attention later in the procurement process. The response therefore shows good experience and understanding of the requirements and sufficient competence demonstrated through relevant evidence.

4 **Excellent** (exceeds the requirement). The response exceeds what is expected for the criteria. Leaves no doubt as to the capability and commitment to deliver what is required. The response shows very good understanding of the requirements and excellent experience demonstrated through relevant experience. Considerable insight into the relevant issues. the response is also likely to propose additional value in several respects above that expected.

Price Evaluation

The Financial element of this tender will carry a weighting of 70% of the overall assessment and will be based on the commercial data that is submitted. The tendered rates shall be assessed using the process as described below.

Total Tender Price will be calculated on the following basis:

The Schedules of Rates will be multiplied by confidential indicative quantities to calculate an indicative annual lump sum. An assessment of Daywork costs and other tendered percentages will also be included. Adjustments will be applied in accordance with the various tendered adjustment percentages. This will provide a total lump sum figure.

The lowest price scores the full marks of 70 and then subsequent scores are calculated by: lowest tender/tender amount x 70

These two scores will be added together to provide a single combined score for each Tenderer.

Qualitative Assessment

The following questions are designed to assess the qualitative aspects of your tender submission. The total score of the qualitative assessment is worth 30% of the overall score.

Please ensure you adhere to the page limits and are aware of the maximum score available to each section. Please ensure that your responses references the different sections of the questions and that all attachments (where specifically requested) are cross-referenced.

Please ensure that photographs and graphics are part of the page limit. Each question should be clearly referenced. A maximum of 2 sides of A4 is allowed for each method statement.

Criterion	Requirement	Criteria Weighting	Marks
Method Statement No 1 Quality Control	Provide details of your quality assurance and quality control proposals. This should cover all of the project stages (from pre-commencement, design/procurement to defects liability period) and should include the maximum warranties you propose to provide for various building elements, quality management of sub-contractors and suppliers, defects liability management and stakeholder (statutory bodies, residents, sub-contractors, local community) liaisons.	6%	4
Method Statement No 2 Risk Management	Provide your proposed approach and methodology for managing risks on site. Your proposal should identify specific risks and how you propose to manage them.	8%	4
Method Statement No 3 Programme Management	Provide your proposal and methodology to ensure efficient programming and delivery on time. Identify the risks to the programme and how you propose to manage them.	8%	4
Method Statement No 4 Health and Safety	Provide your proposed approach and method statement for managing health and safety on site and/or provide your health and safety plan. Identify your approach to continuously improve health and safety on site.	8%	4
	Total Quality Score	30%	

APPENDIX A

SUITABILITY ASSESSMENT QUESTIONNAIRE

Suitability Assessment Questionnaire

Thanet District Council

Suitability Assessment Questionnaire under Regulation 111 Public Contracts Regulations 2015

This Suitability Assessment Questionnaire ("SAQ") has been issued by Thanet District Council ("the Authority") in connection with a tender under Part 4 of the Public Contracts Regulations 2015 ("the Regulations"). Your response to the SAQ will be used by the Authority to understand the nature of the bidding organisation and to undertake a financial assessment of bidders.

Notes for completion

Please ensure that you complete this SAQ fully, as requested as part of the tender submission. Failure to do so may result in your tender being disqualified. If the question does not apply to you please write N/A; if you do not know the answer please write N/K.

"Authority" means the purchasing organisation that is seeking to award a contract.
"You"/ "Your" or "Supplier" means the business or company which is completing this SAQ.

Verification of Information Provided

Please do not send any supporting documents with your tender. **However, the Authority may ask to see these documents at a later stage, so it is advisable you ensure they can be made available upon request.** You may also be asked to clarify your answers or provide more details about certain issues.

Single Sole Bidder	Where you are tendering for this contract individually, you do not need to provide details of other partners or sub-contractors. The Authority will enter into the Contract with you directly. **Exception** - where sub-contractors will play a significant role in the delivery of the services or products under any contract (more than 50%), please indicate on a separate **Schedule** (by inserting the relevant company/organisation name) the composition of the supply chain, indicating which member of the supply chain will be responsible for the elements of the requirement

Consortia, Partnerships and Joint Ventures	If you are tendering for this contract on behalf of a consortium, partnership joint venture, the following information must be provided: ▪ full details of the consortium partnership or joint venture, and ▪ information sought in this SAQ in respect of each of the consortia, partnership or joint venture constituent members as part of a single response. Where Suppliers are proposing to create a separate corporate entity, they should provide details of the actual or proposed percentage shareholding of the constituent members within the consortium in a separate **Schedule**. If a consortium is not proposing to form a corporate entity, full details of alternative proposed arrangements should be provided in the **Schedule**. However, please note the Authority reserves the right to require a successful consortium to form a single legal entity in accordance with Regulation 19(6) of the Public Contracts Regulations 2015. If there is a subsequent change in the consortium partnership or joint venture, you must inform the Authority immediately.

1. Legal Status - Organisation Details

This Section is for information only. It must however be **completed in full.**

Full name of organisation tendering (or of organisation acting as lead contact where a consortium, partnership or joint venture response is being submitted)		
ORGANISATION DETAILS		
Registered office address	Company or charity registration number	
	VAT registration number	
	Name of immediate parent company	
	Previous names / registered names (if different):	
		Please Tick
Type of organisation	i) a public limited company	
	ii) a limited company	
	iii) a limited liability partnership	
	iv) other partnership	
	v) sole trader	
	vi) other (please specify in box)	

Consortia and Sub-Contracting	a) Your organisation is tendering to provide the services/goods required itself	
	b) Your organisation is tendering in the role of Prime Contractor and intends to use third parties to provide some services	
	c) The Supplier is a consortium	
If your answer is (b) or (c) please indicate in a separate Schedule (by inserting the relevant company/organisation name) the composition of the supply chain, indicating which member of the supply chain (which may include the Supplier solely or together with other providers) will be responsible for the elements of the requirement.		

1B. For completion by Non-UK Businesses Only

	Tick as Appropriate
Registration with professional or trade body: Is your business registered with the appropriate trade or professional register(s) in the EU member state where it is established (as set out in Annex XI of Directive 2014/24/EU) under the conditions laid down by that member state).	Yes ☐ No☐
Is it a legal requirement in the State where you are established for you to be licensed or a member of a relevant organisation in order to provide the requirement in this procurement?	Yes ☐ No☐
If yes, please provide details of what is required and confirm that you have complied with this.	

2. Grounds for Mandatory Rejection under Regulation 57

Important Notice:

If you answer 'Yes' to any question in this section your tender will be rejected. If unsure how to respond, you should contact us for advice before completing this form.

Please state 'Yes' or 'No' to each question below.

Within the last 5 years, has your organisation or any directors or partner or any other person who has powers of representation, supervision decision or control been convicted of any of the following offences?	**Answer**
(b) conspiracy within the meaning of section 1 or 1A of the Criminal Law Act 1977 or article 9 or 9A of the Criminal Attempts and Conspiracy (Northern Ireland) Order 1983 where that conspiracy relates to participation in a criminal organisation as defined in Article 2 of Council Framework Decision 2008/841/JHA on the fight against organised crime	
(b) the common law offence of bribery, where the offence relates to active corruption	
(c) bribery within the meaning of sections 1, 2 or 6 of the Bribery Act 2010, or section 113 of the Representation of the People Act 1983	
(d) offence relates to fraud affecting the European Communities' financial interests as defined by Article 1 of the Convention on the protection of the financial interests of the European Communities:	
(i) the common law offence of cheating the Revenue;	
(ii) the common law offence of conspiracy to defraud;	
(iii) fraud or theft within the meaning of the Theft Act 1968, the Theft Act (Northern Ireland) 1969, the Theft Act 1978 or the Theft (Northern Ireland) Order 1978;	
(iv) fraudulent trading within the meaning of, article 451 of the Companies (Northern Ireland) Order 1986 or section 993 of the Companies Act 2006;	
(v) fraudulent evasion within the meaning of section 170 of the Customs and Excise Management Act 1979 or section 72 of the Value Added Tax Act 1994;	
(vi) an offence in connection with taxation in the European Union within the meaning of section 71 of the Criminal Justice Act 1993;	
(vii) destroying, defacing or concealing of documents or procuring the execution of a valuable security within the meaning of section 20 of the Theft Act 1968 or section 19 of the Theft Act (Northern Ireland) 1969;	
(viii) fraud within the meaning of section 2, 3 or 4 of the Fraud Act 2006; or	
(ix) the possession of articles for use in frauds within the meaning of section 6 of the Fraud Act 2006, or the making, adapting, supplying or offering to supply articles for use in frauds within the meaning of section 7 of that Act;	
(e) any offence listed:	

(i) in section 41 of the Counter Terrorism Act 2008; or	
(ii) in Schedule 2 to that Act where the court has determined that there is a terrorist connection	
(f) any offence under sections 44 to 46 of the Serious Crime Act 2007 which relates to an offence covered by subparagraph (e);	
(g) Money laundering within the meaning of section 340(11) of the Proceeds of Crime Act 2002;	
(h) an offence in connection with the proceeds of criminal conduct within the meaning of section 93A, 93B or 93C of the Criminal Justice Act 1988 or article 45, 46 or 47 of the Proceeds of Crime (Northern Ireland) Order 1996; or	
(i) an offence under section 4 of the Asylum and Immigration (Treatment of Claimants, etc.) Act 2004	
(j) an offence under section 59A of the Sexual Offences Act 2003	
(k) an offence under section 71 of the Coroners and Justice Act 2009	
(l) an offence in connection with the proceeds of drug trafficking within the meaning of section 49, 50 or 51 of the Drug Trafficking Act 1994; or	
(m) any other offence within the meaning of Article 57(1) of the Public Sector Directive as defined by the national law of any relevant State.	

Has it been established by a judicial or administrative decision having final and binding effect in accordance with the legal provisions of any part of the United Kingdom or the legal provisions of the country in which your organisation is established (if outside the UK), that your organisation is in breach of obligations related to the payment of tax or social security contributions? If you have answered Yes to this question, please use a separate **Schedule** to provide further details. Please also use this Schedule to confirm whether you have paid, or have entered into a binding arrangement with a view to paying, including, where applicable, any accrued interest and/or fines?	

3. Grounds for discretionary rejection under Regulation 57(3) & 57 (8)

Important Notice.

The Authority may exclude you from the procurement exercise if any of the following apply, but may decide, having considered all the relevant circumstances, to allow you to proceed further. If you answer 'yes' to any question, please set out (in a separate Schedule) full details of the relevant incident (including dates and any remedial action or arrangements made/ taken subsequently). The Authority will evaluate this evidence before making a decision on whether to exclude you.

The Authority is also entitled to exclude you in the event that you are guilty of serious misrepresentation in providing any information or you fail to provide any such

information requested by us.

Please state 'Yes' or 'No' to each question below.

Within the past three years, please indicate if any of the following situations have applied, or currently apply, to your organisation.	**Answer**
Conflicts of Interest -Is any officer, employee or consultant of your company an employee or ex-employee of the Authority or in any way connected to an employee or ex-employee of the Authority?	
Is any officer, employee or consultant of your company an elected member of the Authority or someone who has been an elected member in the last 4 years?	
Is any officer, employee or consultant of your company involved in any other organisation/company that may be interested in bidding for the Authority's services under this tender process?	
Have any officers (directors or senior managers) been bankrupt or involved in any company, which has gone into liquidation or receivership?	
being a partnership constituted under Scots law, has granted a trust deed or become otherwise apparently insolvent, or is the subject of a petition presented for sequestration of its estate; or	
Has the company been or is currently subject to proceedings for the appointment of a receiver, manager or administrator on behalf of a creditor appointed (in respect of the company's business or any part thereof)?	
Has your organisation	
(a) been convicted of a criminal offence relating to the conduct of your business or profession;	
(b) your organisation is guilty of grave professional misconduct, which renders its integrity questionable;	
(c) failed to fulfil obligations relating to the payment of social security contributions under the law of any part of the United Kingdom or of the relevant State in which you are established; or	
(d) failed to fulfil obligations relating to the payment of taxes under the law of any part of the United Kingdom or of the relevant State in which you are established?	
(e) failed to comply with applicable obligations relating to environmental, social and labour law established by EU law, national law, collective agreements or by the international environmental, social and labour law provisions?	
(f) attempted or obtained confidential information, entered into unlawful agreements with competitors whose aim or effect is to impede, restrain or distort competition in respect of this tender, or influence the evaluation committee or the contracting authority during the process of examining, clarifying, evaluating and comparing tenders	
(g) in respect of any services equivalent to or similar to the Services, has your company ever had to pay liquidated damages or financial penalties levied in respect of a failure to perform the terms of a contract?	

4. Health & Safety

The following applies to organisations that are bidding for work to be undertaken in the UK.
The bidding organisation must:

- Ensure that its entire workforce and subcontractors will comply with all relevant health and safety legislation as well as any requirements or instructions from the Council.

- Have appointed a competent person with overall responsibility for health and safety that is duly authorised in the organisation.

- Have processes in place for the identification of training needs and delivery of training to its workforce appropriate to the work for which it is bidding.

- Have processes in place for the development of risk assessments and method statements relevant to the nature of the work for which it is bidding that will identify, manage and mitigate associated risks and hazards.

- *(If it is an organisation with five or more employees)* have in place a written health and safety policy as required by Section 2(3) of the Health and Safety at Work etc Act 1974 and issue any codes of safe working practices to your workforce. This policy must provide details of the competent person or persons that have been appointed on behalf of the organisation to undertake the measures needed to comply with the requirements and prohibitions of the Management of Health and Safety at Work Regulations 1999.

The Authority may verify your compliance with the above requirements at any stage of the procurement process or during the life of the contract, by means of policy checking, validation of accreditations, site audits or any other method it deems appropriate.
For further information on employers' health and safety obligations, please visit the Health and Safety Executive website at
http://www.hse.gov.uk/simple-health-safety/index.htm.

Specific guidance on how to write a policy and risk assessment is available at http://www.hse.gov.uk/simple-health-safety/write.htm.

Confirm that you understand and agree to your undertakings as described above.

Please confirm as appropriate
Yes ☐ No ☐

5. Economic and Financial Standing

FINANCIAL INFORMATION		
		Yes/No
1	Please confirm that your annual turnover (at the date of the last audited accounts) was greater than £2 Million	
2	If the response to **Q1** above was based on audited accounts which are dated more than 6 months ago from the date of tender, please confirm that there has been no material change in the financial or trading conditions of the Company?	
3	If the organisation has been trading for less than 12 months, please confirm that your projected turnover (based on management accounts) was greater than £2 Million	
4	Please confirm whether you do not have any outstanding or threatened claims or litigation in which the applicant or any member of a consortium of applicants are currently involved or which have been settled during the past three years?	
5*	Do you have professional indemnity insurance of £2 Million	
6*	Do you have Public Liability insurance £10 Million?	
7*	Do you have Employers liability insurance of at least £10 Million?	
8	Would you be prepared to increase your insurance levels to the amounts we require if you win this tender?	

The Authority reserves the right to request further financial information and or request a credit agency report to confirm that the supplier satisfactorily meets the authorities minimum financial requirements. The Authority uses CreditSafe as its credit reference agency for returning turnover and credit scores. This information will be requested from Creditsafe between 9th March 2016 and 9th June 2016. Creditsafe contact details: Tel +44 2920 886 500/Email ukinfo@creditsafeuk.com

If you are bidding as a consortium, partnership, joint venture or special purpose vehicle, we will obtain this information for each member of the bidding entity. The threshold for turnover can be met in entirety by one or a combination of members; it is not necessary for each member to individually meet the turnover threshold.

* You do not need to have the above level of insurance when submitting your tender, however, you must confirm that in the event that you are successful with this tender, you will have the appropriate levels of insurance in place from the contract commencement date.

6. Capability

(Where the Supplier is a special purpose vehicle and not intending to be the main provider of the goods or services, the information requested should be provided in respect of the principal intended provider of the goods or services.)

	EXPERIENCE AND CONTRACT EXAMPLES			
	Please provide details of up to three contracts from either or both the public or private sector, that are relevant to the Authority's requirement. Contracts for the supply of goods or services should have been performed during the past three years. Works contracts may be from the past five years. (The customer contact should be prepared to speak to the purchasing organisation to confirm the accuracy of the information provided below if we wish to contact them).			
		Contract 1	Contract 2	Contract 3
1.1	Customer Organisation (name):			
1.2	Customer contact name, phone number and email			
1.3	Contract start date Contract completion date Contract Value			
If you cannot provide at least one example, please briefly explain why (50 words max)				

	Yes	No
In respect of any similar rehabilitation and conversion tenders in which your organisation was involved, have you had the contract terminated or did you withdraw before the end of the contract?		
Please confirm that you have understood the Authority's requirements for this Tender and you have the necessary qualifications, competence and key personnel with relevant experience to fulfil this contract?		

7	I declare that to the best of my knowledge the answers submitted in this Suitability Assessment Questionnaire are correct. I understand that the information will be used in the process to assess my organisation's suitability to be the selected to provide the services to the Authority. I am signing on behalf of my organisation. I understand that the Contracting Authority may reject the tender if there is a failure to answer all relevant questions fully or if I provide false/misleading information.	
	FORM COMPLETED BY	
	Name & Position in organisation:	
	Full Name and Address of Company	
	Date:	
	Signature:	
	Email address	
	Telephone no.	

For further information, please contact:

Karen Paton
Strategic Procurement Manager
E: Karen.paton@thanet.gov.uk

BILL NR 1

PRELIMINARIES

BILL NR 1

40-46 SWEYN ROAD

PRELIMINARIES

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
	BILL NR 1				
	PRELIMINARIES				
A10	**PROJECT PARTICULARS**				
	Title of Project and Postal Address				
01	Name: 40-46 Sweyn Road, Margate, CT9 2DH				
02	Nature: Rehabilitation and conversion of an existing fire damaged residential property in to 2 x 4 Bedroom Houses, 2 x 2 Bedroom Flats and 2 x 3 Bedroom Maisonettes.				
03	Location: 40-46 Sweyn Road, Margate, CT9 2DH				
	Name and Address of Employer and Consultants				
04	The Employer will be; Thanet District Council PO Box 9 Cecil Street Margate Kent CT9 1XZ				
05	The Contract Administrator will be; Potter Raper Partnership Duncan House Burnhill Road Beckenham Kent BR3 3LA and all references to the Contract Administrator hereafter shall refer to them.				
06	The Quantity Surveyor will be; Potter Raper Partnership Duncan House Burnhill Road Beckenham Kent BR3 3LA and all references to the Quantity Surveyor hereafter shall refer to them.				
07	The Mechanical and Electrical Services Engineers will be; Chris Evans Consulting 71 Capital Business Centre 22 Carlton Road South Croydon Surrey CR2 0BS				

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A10	**PROJECT PARTICULARS (CONT'D)**				
08	The Principal Designer will be; Potter Raper Partnership Duncan House Burnhill Road Beckenham Kent BR3 3LA				
A11	**TENDER AND CONTRACT DOCUMENTS**				
09	Drawings used for the preparation of these Schedule of Works are listed in Appendix "A" to these Bills.				
A12	**THE SITE/EXISTING BUILDINGS**				
	Site boundaries				
10	The site boundaries are indicated on the Tender Drawings.				
	Existing Buildings on or Adjacent to the Site				
11	The Contractor is to note that the adjoining buildings, access roads and footpaths will be in constant use during the progress of the contract and he will be required to execute the Works, arrange for deliveries to and cartage from the site so as to cause the minimum of inconvenience to others.				
	Existing Mains/Services				
12	The Contractor shall be entirely responsible for determining the location and layout of any existing services and drainage likely to affect the execution of the Works as no claim for extra costs arising from a lack of knowledge will be entertained.				
	Trial Holes or other Site Investigation				
13	No trial holes or other site investigations are available.				
	Access for Inspection of the Site and Buildings				
14	Arrangements for access to the site are to be made with Bob Porter, Thanet District Council, Housing Regeneration Team, Tel: 01843 577 406				
	Working Area				
15	The Contractor's working area shall be confined within the site boundaries and he shall not be permitted to use any areas adjacent to the site or be allowed onto the neighbouring properties.				

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A12	**THE SITE/EXISTING BUILDINGS (CONT'D)**				
	Parking				
16	Parking is on the street and is subject to local authority restrictions.				
A13	**DESCRIPTION OF THE WORK**				
17	Rehabilitation and conversion of an existing fire damaged residential property in to 2 x 4 Bedroom Houses, 2 x 2 Bedroom Flats and 2 x 3 Bedroom Maisonettes. 1) Stripping out existing fabric 2) Conversion and refurbishment to suit new layout to building control standards. 3) Complete renewal of the floors and ceilings throughout. 4) New wall finishes and renewal of partitions and doors 5) Alterations to existing mechanical and electrical services. 6) Window Renewal. 7) External works including landscaping.				
17A	The works also include for the following Contractor Designed Works; 1) Temporary Works 2) Plumbing, Mechanical and Electrical Installations to all properties				
A20	**CONTRACT/SUB-CONTRACT**				
	Contract Documents				
18	The Contract Documents will comprise the Contract Drawings, Schedule of Works and Conditions of Contract all duly signed by the parties thereto.				
19	It is a requirement that this Contract shall be executed as a deed.				
	Form of Contract				
20	The Articles of Agreement to be entered into and the Conditions of Contract will be the Intermediate Building Contract with Contractors Design 2011 as issued by the Joint Contracts Tribunal Limited and any amendments made up to the date of tender.				
20A	The Articles of Agreement shall be modified by the incorporation of the Public Sector Supplement 2011 as issued by the Joint Contracts Tribunal Limited.				
20B	The Contractor's attention is also drawn to the fact that Articles of Agreement shall also be modified by the incorporation of Thanet District Council's Standard Clauses.				

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**				

Contract Particulars

Part 1: General

Note: The following is a copy of the Contract Particulars showing the details which will be inserted before the signing of the Contract:-

All references throughout relating to the Architect / Contract Administrator shall mean the 'Contract Administrator'

1st Recital Works are to refurbish 40-46 Sweyn Road
2nd Recital Contractors Design Portion will apply to all Mechanical and Electrical Installations
3rd Recital Drawings are Listed in Tender documents B7341 Dated March 2016. Appendix A
4th Recital Employers Requirements shall mean tender documents reference B7341 dated March 2016 including all appendices.
4th Recital The employer has supplied Specifications and schedules of work.
5th Recital Option A Applies
6th Recital Contractors TBA Proposals
6th Recital CDP Analysis
9th Recital No information release schedule has been provided

8th Recital and clause 4.5	Construction Industry Scheme (CIS)	Employer at the Base Date *is a 'contractor' for the purposes of the CIS
10th Recital	CDM Regulations	The Project *is notifiable
11th Recital	Description of Sections (if any)	Not Applicable
12th Recital	Framework Agreement	Not Applicable

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**				
13th Recital and Schedule 5	Supplemental Provisions (Where neither entry against an item below is deleted, the relevant paragraph applies.)				
	Collaborative working — Paragraph 1 * applies/~~does not apply~~				
	Health and safety — Paragraph 2 * applies/~~does not apply~~				
	Cost savings and value improvements — Paragraph 3 * applies/~~does not apply~~				
	Sustainable development and environmental considerations — Paragraph 4 * applies/~~does not apply~~				
	Performance Indicators and monitoring — Paragraph 5 * applies/~~does not apply~~				
	Notification and negotiation of disputes — Paragraph 6 * applies/~~does not apply~~				
	Where paragraph 6 applies, the respective nominees of the Parties are: Employer's nominee: Annette Claudel 01843 577 710; Contractor's nominee: ——— or such replacement as each Party may notify to the other from time to time				

To Collection £

				Fixed Charge		Time Related Charge	
				£	p	£	p
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**						
	Article 8	Arbitration (if neither entry is deleted Article 8 and clauses 9.3 to 9.8 do not apply. If disputes and differences are to be determined by arbitration and not by legal proceedings, it must be stated that Article 8 and clauses 9.3 to 9.8 apply)	Article 8 and clauses 9.3 to 9.8 (Arbitration) *apply/~~do not apply~~				
	1.1	Base Date	Ten days before return of tenders				
	1.1	Date for Completion of the Works (where completion by sections does not apply)	46 Weeks after the Date of Possession				
	1.7	Addresses for service of notices by the parties *(if none is stated, the address in each case, subject to clause 1.7.3, shall be that shown at the commencement of the Agreement)*	Employer: Thanet District Council, PO Box 9, Cecil Street, Margate, Kent, CT9 1XS Contractor _____ (Fax Number) _____				
	2.4	Date of possession of the site (where possession by sections does not apply)	To be agreed on completion of legal agreement but anticipated to be May 2016				
	2.5	Deferment of possession of the site (where possession by sections does not apply)	Clause 2.5 *~~applies~~/does not apply				

To Collection £

				Fixed Charge		Time Related Charge	
				£	p	£	p
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**						
	2.23.2	Liquidated damages (where completion by sections does not apply)	At the rate of £2,596.46 Per week				
	2.30	Rectification Period (where completion by sections does not apply) *(if no other period is stated, the period is 6 months)*	12 months from the date of practical completion of the Works				
	2.34.3	Contractors Designed Portion: limit of Contractors liability for loss of use etc (if any)	£ 1,000,000__				
	4.6	Advance payment (not applicable where the Employer is a Local Authority)	Clause 4.6 ~~applies~~/does not apply If applicable the advance payment will be £ ……/…… per cent of the Contract Sum and will be paid to the Contractor on _____ It will be reimbursed to the Employer in the following amount(s) and at the following time(s) _____ _____				

To Collection £

			Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**					
	4.6 Advance Payment Bond (Not applicable where the Employer is a Local Authority) (Where an advance payment is to be made, an advance payment bond is required unless stated that it is not required.)	An advance payment bond * ~~is/~~is not required				
	4.7.1 Interim payments – due dates (If no date is stated, the first due date is one month after the Date of Possession)	The first date is: one month after the Date of Possession and thereafter the same date in each month or the nearest Business Day in that month				
	4.8.1 Interim payments – percentage of value. Where the works, or those works in a Section, have not achieved practical completion, the percentage of total value in respect of the works that have not achieved practical completion (the percentage is 95 per cent unless a different rate is stated)	95 per cent				
	Where the Works, or those works in a Section, have achieved practical completion, the percentage in respect of the completed works is (the percentage is 97 ½ per cent unless a different rate is stated)	97 ½ per cent				

To Collection £

				Fixed Charge		Time Related Charge	
				£	p	£	p
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**						
	4.9.4	Listed items – uniquely identified *(Delete entry if no bond is required)*	~~* For uniquely identified listed items a bond in respect of payment for such items is required for £ _____~~				
	4.9.5	Listed items – not uniquely identified (Delete the entry if clause 4.9.5 does not apply)	~~* For listed items that are not uniquely identified a bond in respect of payment for such items is required for £ _____~~				
	4.15 and Schedule 4	Contribution, levy and tax fluctuations	Schedule 4 (Fluctuations Option) applies				
		Percentage addition for Fluctuations Option paragraph 12	nil per cent				
	6.4.1.2	Contractor's insurance – injury to persons or property - Insurance cover *(for any one occurrence or series of occurrences arising out of one event)*	£10,000,000				
	6.5.1	Insurance – liability of Employer *(not required unless it is stated that it may be required and the minimum amount of indemnity is stated)*	Insurance *~~may be required/~~is not required Minimum amount of indemnity for any one occurrence or series of occurrences arising out of one event £ ……				
	6.7 and Schedule 1	Insurance of the Works – Insurance Options	Schedule 1 ~~* Insurance Option A applies~~ ~~Insurance Option B applies~~ * Insurance Option C applies				

			Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**					
	6.7 and Schedule 1 Insurance Option A (paragraphs A.1 and A.3), B (paragraph B.1) or C (paragraph C.2)	Percentage to cover professional fees *(if no other percentage is stated, it shall be 15 per cent)*	15 per cent			
	6.7 and Schedule 1 Insurance Option A (paragraph A.3)	Annual renewal date of insurance (as supplied by the Contractor)	_____			
	6.10 and Schedule 1	Terrorism Cover – details of the required cover (state reference numbers and dates or other identifiers of documents setting out the requirements. Unless otherwise stated, Pool Re Cover is required				
	6.12	Joint Fire Code	The Joint Fire Code *applies/~~does not apply~~			
		If the Joint Fire Code applies, state whether the insurer under Schedule 1, Insurance Option A, B or C (paragraph C.2) has specified that the works are a 'Large Project'	* Yes~~/No~~			

To Collection £

			Fixed Charge		Time Related Charge	
			£	p	£	p
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**					
	6.15	Joint Fire Code – amendments/revisions (the cost shall be borne by the Contractor unless otherwise stated)	* The costs, if any, of compliance with amendment(s) or revision(s) to the Joint Fire Code shall be borne by the ~~Employer/~~the Contractor			
	6.16	Contractor's Designed Portion (CDP) Professional Indemnity Insurance				
		Level of Cover (If an alternative is not selected the amount shall be the aggregate amount for any one period of insurance. A period of insurance for these purposes shall be one year unless otherwise stated.)	Amount of indemnity required * ~~relates to claims or series of claims arising out of one event /~~ * is the aggregate amount for any one period of insurance and is £ 2,000,000			
		(If no amount is stated, insurance under clause 6.16 shall not be required).				

			Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
		Cover for pollution and contamination claims (If no amount is stated, such cover shall not be required; unless otherwise stated, the required limit of indemnity is an annual aggregate amount	~~* is required, with a sub-limit of indemnity of £ _____ /~~ is not required			
		Expiry of required period of CDP Professional Indemnity Insurance is	6 years			
	8.9.2	Period of suspension *(if none stated, the period is 2 months)*	2 months			
	8.11.1.1 to 8.11.1.5	Period of suspension *(if none stated, the period is 2 months)*	2 months			

				Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
	9.2.1	Adjudication	The Adjudicator is _____				
		Nominating body – where no Adjudicator is named or where the named Adjudicator is unwilling or unable to act (whenever that is established) (Where an Adjudicator is not named and a nominating body has not been selected, the nominating body shall be one of the bodies listed opposite selected by the Party requiring the reference to adjudication.)	* Royal Institute of British Architects * ~~The Royal Institution of Chartered Surveyors~~ ~~* Construction adjudicators.com~~ ~~* Association of Independent Construction Adjudicators~~ ~~* Chartered Institute of Arbitrators~~				
	9.4.1	Arbitration - Appointer of Arbitrator (and of any replacement) (If no appointer is selected, the appointer shall be the President or a Vice-President of the Royal Institute of British Architects)	President or a Vice-President: * Royal Institute of British Architects * ~~The Royal Institution of Chartered surveyors~~ ~~* Chartered Institute of Arbitrators~~				
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**						
	Conditions **Section 1: Definitions and Interpretation**						
	1.1	Definitions					
	1.2	Reference to Clauses etc					
	1.3	Agreement etc to be read as a whole					
	1.4	Headings, references to persons, legislation etc					
	1.5	Reckoning periods of days					
	1.6	Contracts (Rights of Third Parties) Act 1999					

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
1.7	Notices and other communications				
1.8	Issue of Architect/Contract Administrator's certificates				
1.9	Effect of Final Certificate				
1.10	Effect of certificates other than Final Certificate				
1.11	Applicable Law				
Section 2: Carrying out the Works					
2.1	General obligations				
2.2	Materials, goods and workmanship				
2.3	Fees and charges				
2.4	Date of Possession - progress				
2.5	Deferment of possession				
2.6	Early use by Employer				
2.7	Work not forming part of the Contract				
2.8	Contract Documents				
2.9	Levels and setting out of the works				
2.10	Construction information				
2.11	Further drawings, details and instructions				
2.12	Schedule of Works				
2.13	Instructions on errors, omissions and inconsistencies				
2.14	Instructions – additions to Contract Sum, exceptions				
2.15	Divergences from Statutory Requirements				
2.16	Emergency compliance with Statutory Requirements				
2.17	Materials and Goods – on site				
2.18	Materials and Goods – off site				
2.19	Notices of delay - extensions				
2.20	Relevant events				

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
	2.21 Practical Completion and Certificates				
	2.22 Certificate of non-completion				
	2.23 Liquidated damages for non-completion				
	2.24 Repayment of liquidated damages				
	2.25 Contractor's consent				
	2.26 Practical completion date				
	2.27 Defects etc – Relevant Part				
	2.28 Insurance – Relevant Part				
	2.29 Liquidated damages – Relevant part				
	2.30 Rectification				
	2.31 Certificate of making good				
	2.32 As Built Drawings				
	2.33 Copyright and Use				
	2.34 Design liabilities and limitation				
	Section 3: Control of the works				
	3.1 Access for Architect/Contract Administrator				
	3.2 Person-in-charge				
	3.3 Clerk of works				
	3.4 Replacement of Architect/Contract Administrator or Quantity Surveyor				
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**				
	3.5 Consent to sub-contracting				
	3.6 Conditions of sub-contracting				
	3.7 Named Sub-Contractors				
	3.8 Compliance with instructions				
	3.9 Non-compliance with instructions				
	3.10 Provisions empowering instructions				
	3.11 Instructions requiring Variations				
	3.12 Postponement of work				

To Collection £

		Fixed Charge		Time Related Charge	
		£	p	£	p
	3.13 Instructions on Provisional Sums				
	3.14 Inspection - tests				
	3.15 Work not in accordance with the Contract				
	3.16 Instructions as to removal of work, etc				
	3.17 Exclusion of persons from the works				
	3.18 Undertakings to comply				
	3.19 Appointment of successors				
	Section 4: Payment				
	4.1 Work included in Contract Sum				
	4.2 Adjustment only under the Conditions				
	4.3 Adjustment of Contract Sum				
	4.4 VAT				
	4.5 Construction Industry Scheme (CIS)				
	4.6 Advance payment				
	4.7 Interim payments – due dates and certificates				
	4.8 Interim payments – amounts due				
	4.9 Off-site materials and goods				
	4.10 Contractor's Interim Applications and Payment Notices				
	4.11 Interim payments – final date and amount				
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**				
	4.12 Pay Less Notices and general provisions				
	4.13 Contractors right of suspension				
	4.14 Final Certificate and final payment				
	4.15 Contribution, levy and tax fluctuations				
	4.16 Fluctuations – Named Sub-Contractors				
	4.17 Disturbance of regular progress				
	4.18 Relevant Matters				
	4.19 Reservation of Contractor's rights and remedies				

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
	Section 5: Variations				
	5.1 Definition of Variations				
	5.2 Valuation of Variations and provisional sum work				
	5.3 Measurable Work				
	5.4 Daywork				
	5.5 Change of conditions for other work				
	5.6 Additional provisions				
	5.7 Contractor's Designed Portion - Valuation				
	Section 6: Injury, Damage and Insurance				
	6.1 Liability of Contractor – personal injury or death				
	6.2 Liability of Contractor – injury or damage to property				
	6.3 Injury or damage to property – Works and Site Materials excluded				
	6.4 Contractor's insurance of his liability				
	6.5 Contractor's insurance of liability of Employer				
	6.6 Excepted risks				
	6.7 Insurance options				
	6.8 Related definitions				
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**				
	6.9 Sub-Contractors – Specified Perils cover under Joint Names All Risks Policies				
	6.10 Terrorism Cover – policy extensions and premiums				
	6.11 Terrorism Cover – non availability – Employers option				
	6.12 Application of clauses				
	6.13 Compliance with Joint Fire Code				
	6.14 Breach of Joint Fire Code – remedial measures				
	6.15 Joint Fire Code – amendments / revisions				

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
	6.16 Obligation to insure				
	6.17 Increased cost and non-availability				
	Section 7: Assignment and Collateral Warranties				
	7.1 Assignment				
	7.2 Notices				
	7.3 Execution of Collateral Warranties				
	7.4 Contractor's Warranties – Purchasers and Tenants				
	7.5 Contractor's Warranty - Funder				
	7.6 Sub-Contractor's Warranties				
	Section 8: Termination				
	8.1 Meaning of insolvency				
	8.2 Notices under section 8				
	8.3 Other rights, reinstatement				
	8.4 Default by Contractor				
	8.5 Insolvency of Contractor				
	8.6 Corruption				
	8.7 Consequences of termination under clauses 8.4 to 8.6				
	8.8 Employer's decision not to complete the Works				
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**				
	8.9 Default by Employer				
	8.10 Insolvency of Employer				
	8.11 Termination by either Party				
	8.12 Consequences of termination under clauses 8.9 to 8.11 etc				
	Section 9: Settlement of Disputes				
	9.1 Mediation				
	9.2 Adjudication				
	9.3 Conduct of arbitration				

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
	9.4 Notice of reference to arbitration				
	9.5 Powers of Arbitrator				
	9.6 Effect of award				
	9.7 Appeal – question of law				
	9.8 Arbitration Act 1996				
	Schedules				
	Schedule 1 – Insurance Options				
	Schedule 2 – Named Sub-Contractors				
	Schedule 3 – Forms of Bonds				
	Schedule 4 – Fluctuations Option – Contribution, levy and tax fluctuations				
	Schedule 5 – Supplemental Provisions				
	Part 2: Collateral Warranties				
	Purchaser and Tenant Warranties				
	(A) Identity of Purchasers/Tenants in whose favour Collateral Warranties may be required				
	Not required				
	(B) Contractor's Warranties – Purchasers and Tenants				
	Not required				

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**				
	(D) Contractor's Warranties - Funder				
	Not required				
	Collateral Warranties from Sub-Contractors				
	(E) If warranties are required from sub-contractors, complete the particulars below — Warranties will be required from Sub-Contractors with a significant design input				
	Clauses 3.5 and 3.6 of the Conditions — Sub-Contractors from whom Warranties may be required — Type(s) of warranty (~~SCWa/P&T, SCWa/F~~, SCWa/E) required from each sub-contractor with a design responsibility				
	Levels of Professional Indemnity required (if applicable) £2,000,000				
	The following clauses of the Conditions of Contract will be deleted or modified as follows:				
21	Fourth Recital – the words "the Specification" / "the Work Schedules" and all references to Named Sub-Contractors will be deleted.				
22	Fifth Recital – pricing option (A) – line 1 "Specification/Work Schedules" will be deleted.				
23	Fifth Recital – pricing option (B) will be deleted.				
24	Fifth Recital – reference to "the Activity Schedule" will be deleted				
25	The Ninth Recital will be deleted.				
26	The Eleventh Recital will be deleted.				
27	Clauses 4.15 and 4.16 will be deleted and the following clause 4.15A inserted:				
28	4.15A No account shall be taken in any payment to the Contractor or Named Sub-Contractors under this Contract of any change in the tax, or any cost to the Contractor or Named Sub-contractors of the labour, materials, plant or other resources employed in carrying out the works.				
	The following clauses are in explanation or emphasis of matters referred to in the Conditions of Contract:				

To Collection £

		Fixed Charge		Time Related Charge	
		£	p	£	p
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**				
	Clause 2.8 – Contract Documents				
29	The Contract Drawings are not necessarily all those drawings from which the Schedule of Works have been prepared but those necessary to indicate the scope of works.				
	Clause 2.12 – Schedule of Works				
30	These Schedule of Works, unless otherwise specifically stated in respect of any particular item or items, have not been prepared in accordance with the Standard Method of Measurement of Building Works, 7th Edition (Revised July 1998), incorporating Amendments 1 and 2 published by the Royal Institution of Chartered Surveyors and the Construction Confederation				
	The following clauses are in explanation or emphasis of matters referred to in the Conditions of Contract: (cont'd)				
	Clause 2.19 – Notice of delay - extensions				
31	The Contractor shall order all materials and goods and place all sub-contracts as soon after signing the Contract as he deems necessary to ensure the prompt and timely delivery of materials and goods and commencement of Sub-Contractors' work to suit the building operations. He shall obtain written confirmation of delivery dates of materials and goods and of the commencement of Sub-Contractors' work. The Contractor will be held solely responsible for any delay occasioned by his failure to comply with the requirements of this clause.				
	Clause 2.20 – Relevant Events				
32	With regard to Clause 2.20.8 an extension of time will only be considered for delays caused by exceptionally adverse weather conditions which shall be construed as meaning adverse weather over and above that which might reasonably be expected having due regard to the time of the year and to the period of the particular aspect of works which is delayed.				
	Clause 4.8 – Interim Certificates and Valuations				
33	Immediately before each valuation, the Contractor shall provide the Quantity Surveyor with: i) a quantified list of all materials on site showing the unit cost of both his own and Sub-Contractors' materials; ii) a quantified list of materials not on site but the value of which the Contractor wishes to be included for payments under Clause 4.9.				

 To Collection £

		Fixed Charge		Time Related Charge	
		£	p	£	p
A20	**CONTRACT/SUB-CONTRACT (CONT'D)**				
34	The Contractor shall obtain claims for interim payments from the mechanical and electrical sub-contractors and submit the claims to the Services Engineers and the Quantity Surveyors not less than one week prior to the date of each valuation.				
	The following clauses are in explanation or emphasis of matters referred to in the Conditions of Contract: (Cont'd)				
	Clause 6.5.1 – Contractor's insurance of liability of Employer				
35	It is envisaged that no insurance will be required under this Clause.				
	Fluctuations				
36	The Contractor's attention is particularly drawn to the fact that this will be a "fixed price contract" and Clause 4.15 Schedule 4 Fluctuations will apply, and that adjustment will be made only in respect of contribution, levy and tax fluctuations.				
	Contract Bond				
37	Upon execution of this Contract, the Contractor shall deliver to the Employer a performance bond from a reputable bondsman satisfactory to the Employer – the amount of 10% of the Contract Sum in a form recommended by the Association of British Insurers and approved by the Employer.				
A30	**EMPLOYER'S REQUIREMENTS: TENDERING/SUB-LETTING/SUPPLY**				
	Inspect Site, Etc				
38	Before submitting his tender, the Contractor is advised to visit the site and fully examine all tender documents, acquaint himself with the position regarding the supply of water and electricity, the accessibility of the site, the full character of the operations required, the nature of the soil, the supply of and conditions affecting the cost of labour, the availability and prices of materials and all other conditions of the locality in which the Works are to be carried out which might affect his tender as no claim for extra costs arising from lack of knowledge in respect of the foregoing will be allowed.				
	Approved Firms				
39	Where work is described as to be carried out by an 'approved firm' the firms selected by the Contractor will, after final approval by the Contract Administrator shall become 'domestic' Sub-Contractors to the Contractor. Substitution of one firm by another will not be permitted without the express consent of the Contract Administrator.				

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A30	**EMPLOYER'S REQUIREMENTS: TENDERING/SUB-LETTING/SUPPLY (CONT'D)**				
40	The Contractor shall provide, to the Sub-Contractors and other parties working on the premises, all information reasonably necessary to enable them properly to set out, take dimensions and particulars and execute their work in harmony with the surroundings and with other trades and he shall not allow them to proceed otherwise.				
41	The Contractor will be responsible for and is to ascertain from the Sub-Contractors all particulars relating to their work in regard to the positions in which chases, holes, mortices and similar items will be required to be formed, left or cut and this will be deemed to be allowed for as part of the Contractor's attendance. No claim will be considered for the extra cost of cutting away work already built in consequence of any neglect on the part of the Contractor to ascertain these particulars beforehand.				
	Co-ordination of Sub-Contractors				
42	The Contractor will be responsible for co-ordinating the work of Sub-Contractors and is to ascertain from Sub-Contractors all particulars relating to their work in regard to the positions in which chases, holes, mortices and similar items will be required to be formed, left or cut and this will be deemed to be allowed for as part of the Contractor's attendance. No claim will be considered for the extra cost of cutting away work already built in consequence of any neglect on the part of the Contractor to ascertain these particulars beforehand.				
A31	**EMPLOYER'S REQUIREMENTS: PROVISION, CONTENT AND USE OF DOCUMENTS**				
	Tender Documents				
43	The tender documents consist of these Schedule of Works, the Form of Tender, Specifications and Drawings as listed elsewhere.				
44	Immediately upon receipt of these Schedule of Works, the Contractor should check the number of pages contained therein and should any be missing or in duplicate, or if any writing or figures be indistinct, or if any of the wording be ambiguous or the meaning or intention not clear, he is required to notify the Quantity Surveyor and have the matter rectified before his tender is submitted. No liability will be admitted in respect of any claim resulting from the Contractor's failure to comply with the foregoing.				

To Collection £

		Fixed Charge		Time Related Charge	
		£	p	£	p
A31	**EMPLOYER'S REQUIREMENTS: PROVISION, CONTENT AND USE OF DOCUMENTS (CONT'D)**				
	Tender Documents (Cont'd)				
45	No alterations, erasures, omissions or additions are to be made to the text of these Schedule of Works unless directed by the Quantity Surveyor in writing.				
46	The Tender must be submitted on the Form of Tender provided and by the date and time stated. Tenders submitted after the stipulated time will not be considered.				
	Lowest Tender				
47	The Employer does not bind himself to accept the lowest nor any tender, nor will he be responsible for any costs incurred in the preparation of the same.				
	Pricing of Schedule of Works, Checking and Correction of Errors				
48	Upon request, the Contractor will be required to deliver up his original Schedule of Works with each item priced and extended separately in black ink including any Appendix and signed by the Contractor. If any item is left unpriced, the Contractor shall be deemed to have included elsewhere in his rates for the cost of carrying out the work described in that item.				
49	The Quantity Surveyor will examine and check the priced Schedule of Works, etc submitted by any Contractor whose Tender is under consideration and he shall be empowered to call for the correction of any errors so found and for the adjustment of any individual price which he considers unreasonable and for the rectification of any discrepancies as may be necessary.				
50	In the event of an error requiring correction, the tenderer will be given an opportunity of confirming his offer or of amending it to correct genuine errors. The procedures for dealing with errors will be as set out in Clause 68 of JCT Tendering Practice Note 2012.				
51	Mechanical and electrical specialist sub-contract priced specification, schedule of rates, etc will be required for examination and approval by the consultant mechanical and electrical services engineers.				

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A32	**EMPLOYER'S REQUIREMENTS: MANAGEMENT OF THE WORKS**				
	Person in Charge				
52	The Contractor is required to employ a full time Person in Charge on the site for the duration of the works who is fully conversant with British Standards and Codes of Practice and capable of assuming complete responsibility for a contract of this description.				
	Method of Operation and Progress Chart				
53	As soon as the Contractor is notified of the acceptance of his tender he will be required to prepare a detailed programme showing his proposals for executing the whole of the works complete with dates for each operation. The programme shall be prepared in close consultation with the Contract Administrator whose agreement shall be obtained in respect of the following matters: a) The need to give reasonable notice to the Contract Administrator of Contractor's requirements in respect of detailed instructions, drawings, etc relating to each part of the work programme; b) The need to place orders with specialist Sub-Contractors and Suppliers as soon as possible for the proper co-ordination of the work; c) The need to place orders for materials in due time; d) The need to provide a time contingency in respect of adverse weather conditions;				
54	The programme is to be kept up to date by recording progress monthly and it is to be reviewed to take into account the effect of the latest information available on activities completed and any changes in the plan or in the activities in progress or not yet started.				
	Site Meetings				
55	Meetings on the site of the Contractor's management team and the professional consultants shall be convened at monthly intervals or at other intervals agreed between the parties.				

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A32	**EMPLOYER'S REQUIREMENTS: MANAGEMENT OF THE WORKS (CONT'D)**				
56	Contractors Progress Report Contractor to produce and submit a complete progress report every month. To be submitted electronically 3 days in advance of each progress meeting. Programme to be updated every month identifying the critical path and any alterations to the programme to be identified. Contractors Progress Report to include target and objectives such as were last month's targets achieved, what are the targets for next month. Photographs of progress to accompany each report. Report to include monthly updates of issues concerning health and safety.				
	Sundry Documents				
57	All operation and maintenance manuals, manufacturer's literature relating to products used in the works, and record drawings are to be handed over to the Principal Designer before Practical Completion can be considered.				
	Schedule of Conditions				
58	Schedules of existing conditions in areas adjacent to the works are to be prepared by the Contractor and agreed with representatives of the Employer before commencement of the works.				
A34	**EMPLOYER'S REQUIREMENTS: SECURITY/SAFETY/PROTECTION**				
	Existing Premises in Use				
59	The existing buildings which form the site will be vacant.				
60	The Contractor is to note that the adjoining buildings, access roads and footpaths will be in constant use during the progress of the Contract and he will be required to execute the works, arrange for deliveries to and cartage from the site so as to cause the minimum of inconvenience to others.				
61	The Contractor shall take all necessary steps to protect the adjoining owners roof throughout the duration of the Contract and any damage caused to these by the Contractor shall be made good at his own expense.				
62	All glazed rooflights below or adjacent to scaffolding and work areas are to be fully boarded for protection.				
63	The Contractor shall ensure that full security of the works and the premises is maintained at all times.				

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A34	**EMPLOYER'S REQUIREMENTS: SECURITY/SAFETY/PROTECTION (CONT'D)**				
64	Workmen are only to occupy or to be in that part of the works or other buildings necessary for the performance of the works and special instructions are to be given by the Contractor to enforce this requirement.				
	Safety and Welfare Measures				
65	The Contractor shall ensure that all safety and welfare measures required under or by virtue of the provisions of any enactment or regulations, or the working rules of any Industry are complied with strictly. The Contractor shall maintain on site all necessary facilities to comply with this clause.				
	Construction (Design & Management) Regulations 2015				
66	The Contractor shall ensure that adequate resources are allocated or will be allocated to the works to enable him to comply with the requirements and prohibitions imposed on him by the Construction (Design & Management) Regulations 2015 and specific requirements laid down in this document and the Pre-Construction Health and Safety Information documents. The Contractor shall allow in his tender for all costs associated with complying with these requirements.				
67	The Contractor should refer to the Pre-Construction Health and Safety Information documents and other tender documents to ensure that he is fully aware of the Project's health, safety and welfare requirements. The Contractor shall review documentation and ensure that their Construction phase plan manages all site specific hazards.				
68	Practical Completion will be deemed not to have been reached until all information required for inclusion in the Health and Safety File has been passed to the appropriate consultant by the Contractor.				
69	The Contractor is to provide all appropriate information required by the Principal Designer for inclusion in the Health and Safety File – see Regulation 22				
70	All Welfare Facilities provided by the Principal Contractor are to meet the standards laid down in Schedule 2 of the Regulations.				
	Fire Precautions				
71	The Contractor shall comply with fire safety requirements within the existing building and standards relevant to building sites and take all other reasonable precautions against fire.				

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A34	**EMPLOYER'S REQUIREMENTS: SECURITY/SAFETY/PROTECTION (CONT'D)**				
72	The Contractor is to ensure that adequate access to the building is provided and maintained for the use of fire appliances, etc.				
73	The Employer's insurer has specified that the Joint Fire Code applies to the Works. The contractor, his servants, agents and any person employed or engaged by him or his sub-contractors shall comply with the Joint code of Practice for the Protection from Fire of Construction Sites and Buildings Undergoing Renovation – Fire on Construction Sites.				
	Maintenance of Existing Services				
74	Allow for all precautions to secure all drainage connections, gas, water and electric mains, telephone cables, services and lines from injury by or through carrying out of the works. In the event of any such mains, cables, services or lines being found in the way of the work or otherwise requiring attention or removal, the Contractor must protect same from damage and give notice to the Authorities or persons concerned and arrange for the lowering, diversions or removal of such mains, cables, services or lines as may be necessary.				
	Noise				
75	The whole of the works are to be carried out with a minimum of noise. All mixers, hoists, compressors and other mechanical plant must be sited in positions agreed with the Contract Administrator and screened with sound deadening materials.				
76	All mechanical plant, as far as is possible, shall be electrically driven and the Contractor is to allow for any temporary electricity service necessary. Compressed air equipment shall be muffled against noise and obtained from an approved source. Radio sets will not be permitted to be used at any time.				
	Dust				
77	Provide all necessary measures to prevent the passage of dust (including accumulated dust) into adjoining rooms/ premises as a result of building operations.				
78	The Contractor shall liaise with the occupants of adjoining rooms/buildings before the commencement of the Works on site to establish the requirements for protection or removal of their furniture, equipment and fixtures and fittings, and the Contractor shall bear all costs in respect of such protection or removal.				

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A34	**EMPLOYER'S REQUIREMENTS: SECURITY/SAFETY/PROTECTION (CONT'D)**				
	Control of Noise, Pollution and Other Statutory Obligations				
79	Allow for complying with any and all statutory obligations regarding the control of noise, pollution, etc which are in force at the time of tender.				
	Protection				
80	Allow for protecting all work described in these Schedule of Works until completion.				
81	Allow for protecting all open excavations, etc in existing roads and paths beyond the boundary of the site.				
A35	**EMPLOYER'S REQUIREMENTS: SPECIFIC LIMITATIONS ON METHOD/SEQUENCE/ TIMING/USE OF SITE**				
	Access and Storage				
82	Access to the site will generally be from the public highways and the Contractor is to familiarize himself as to all access requirements and allow for all costs in his tender.				
83	Storage for materials is limited to the immediate site working area.				
	Use of the Site				
84	The Contractor will not be permitted to use the site for any purpose other than that of carrying out the work contained in the Contract. He will not be permitted to carry out the manufacture on the site of any articles required for the works if, in the opinion of the Contract Administrator, such work constitutes a nuisance and should be executed elsewhere. He shall obtain the approval of the Contract Administrator for the siting of the spoil heaps, temporary roads, rail and sleeper tracks, paths, sheds and other structures.				
	Limitation of Working Space				
85	The Contractor must limit his operations to the area of the site.				
86	The Contractor shall not permit any workmen to trespass on any parts of the surrounding property outside the area of the works included in the Contract and he shall be held liable for any damage which may arise from his neglect in this respect.				

To Collection £

		Fixed Charge		Time Related Charge	
		£	p	£	p
A35	**EMPLOYER'S REQUIREMENTS: SPECIFIC LIMITATIONS ON METHOD/SEQUENCE/ TIMING/USE OF SITE (CONT'D)**				
87	If any employees of the Contractor misconduct themselves or, in the opinion of the Contract Administrator, are incompetent, the Contractor shall, if so directed, remove such employees from employment on the works.				
	Limitation of Working Hours				
88	The Contractor will be expected to limit working hours of all operatives employed upon the works to times between 8.00 and 17.30 hours on Mondays to Fridays. Should the Contractor wish operatives to work outside these hours, he must first obtain permission in writing from the Contract Administrator.				
89	No additional payments will be made for overtime.				
	Limitations on Method, Sequence or Timing				
90	There are no specific limitations on the method, sequencing or timing of the Works.				
91	The Contractor shall however all the Contract Administrator and the Employer's consultants unimpeded access to the site in order to ascertain the condition of the structure and carry out further site investigations to enable the Contract Administrator to issue the necessary information to the Contractor to carry out the Works.				
	The Use and Disposal of any Materials found on Site				
92	Any building materials or other objects found on the site or produced as a result of the building operations, shall remain the property of the Employer and shall not be utilised in the Contract Works without the written consent of the Contract Administrator together with written agreement regarding the amount of credit to be allowed by the Contractor therefor.				
	Asbestos and Asbestos Based Products				
93	The Contractor is required to notify the Contract Administrator, Principal Designer and the Health and Safety Inspector as necessary if asbestos is suspected within the site area and he expects to operate the requirements of the Health and Safety at Work etc Act 1974. ON NO ACCOUNT IS THE CONTRACTOR TO HANDLE ASBESTOS OR ASBESTOS BASED PRODUCTS PRIOR TO AN INSPECTION BY THE CONTRACT ADMINISTRATOR and the provision of a risk assessment and method statement for its removal for comment by the Contract Administrator and appropriate consultants.				

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A35	**EMPLOYER'S REQUIREMENTS: SPECIFIC LIMITATIONS ON METHOD/SEQUENCE/ TIMING/USE OF SITE (CONT'D)**				
94	Nothing in the clause shall be construed as to prevent the Contractor from proceeding with the works in areas unaffected by asbestos fibres.				
A36	**EMPLOYER'S REQUIREMENTS: FACILITIES/TEMPORARY WORKS/SERVICES**				
	Temporary Hoardings, Fences, Screens, Roofs, Etc				
95	Allow for providing a close boarded secure temporary hoarding to the sites complete with all necessary access gates and doors including decorating with two coats of oil paint. Colour to be agreed with Employer.				
96	Provide, maintain and remove upon completion, secure dust proof screens between dirty work and preserved circulation areas. Include for dust mats where appropriate to stop the tread of dirt around the building. Provide and maintain all necessary temporary runways, ramps, hardstandings, etc that may be required, clear away and make good on completion.				
	Temporary Roofs				
97	Provide a temporary roof over the Works for the duration of the re-roofing works. This roof is to be of a substantial nature incorporating ladder/lattice beams covered with corrugated iron sheets or other similar rigid materials with similar cladding to all sides all as necessary to protect the building from inclement weather conditions.				
98	Although the design and extent of the temporary roof will be the responsibility of the Contractor, he will be required to submit his proposals and design details to the Contract Administrator for approval before commencing the works and supply a certificate from a member of the Institute of Structural Engineers indicating that the temporary roof structure complies in all respects with the relevant Codes of Practice and safety requirements including BS 5973: 1981 Code of Practice for access and working scaffolds and special structures in steel. Any alteration to the temporary roof structure is to be additionally certified. The Contractor must allow for all costs in connection with these requirements.				
	Temporary Nameboard and Advertising				
99	The Contractor may provide and erect a nameboard in an agreed position and alter the position as required from time to time and dismantle and remove on completion. He should allow for paying all costs in connection therewith and also for erecting the nameboards of all consultants. The nameboards shall be all to the approval of the Contract Administrator.				

To Collection £

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A36	**EMPLOYER'S REQUIREMENTS: FACILITIES/TEMPORARY WORKS/SERVICES (CONT'D)**				
100	The Contractor shall not exhibit or allow to be exhibited on any part of the premises or site any bill, placard or advertisement with the sole exception of his own nameboard.				
	Temporary Accommodation for the Use of the Employer				
101	Allow for making available to the Employer, and other representatives of the Employer, a room with suitable facilities for their use for site meetings, etc and provide all necessary lighting and heating.				
	Telephone for Use of the Employer				
102	A separate telephone for the sole use of the Employer is not required.				
103	The Contractor should, however, allow the Employer, his Contract Administrator and his representatives reasonable use of his own telephone during the course of the Contract.				
A40	**CONTRACTOR'S GENERAL COST ITEMS: MANAGEMENT AND STAFF**				
	Unlawful Discrimination and Equal Opportunities				
104	The Contractor shall, at all times, comply with all current legislation regarding discrimination and equal opportunities.				
A41	**CONTRACTOR'S GENERAL COST ITEMS: SITE ACCOMMODATION**				
	Temporary Accommodation for Use of the Contractor				
105	Allow for providing, erecting, dismantling and re-erecting from time to time as directed, all temporary structures required for storage and protection of materials and for the Contractor's own use as offices, messrooms, dry shelters and the like, and clearing away on completion.				
106	Welfare facilities provided are to meet the standard laid down in Schedule 2 of the CDM Regulations 2015.				
107	Allow for suitably equipping a temporary structure with tables, chairs, etc for use for the site meetings and providing adequate heating and refreshments and other attendance for such meetings.				

		Fixed Charge		Time Related Charge	
		£	p	£	p
A42	**CONTRACTOR'S GENERAL COST ITEMS: SERVICES AND FACILITIES**				
	Attendance on Sub-Contractors				
108	The Contractor will be responsible for co-ordinating the work of Sub-Contractors and is to ascertain from the Sub-Contractors all particulars relating to their work in regard to the positions in which chases, holes, mortices and similar items will be required to be formed, left or cut and this will be deemed to be allowed for as part of the Contractor's attendance. No claim will be considered for the extra cost of cutting away work already built in consequence of any neglect on the part of the Contractor to ascertain these particulars beforehand.				
	Site Administration and Security				
109	Allow for providing all watching and lighting which may be legally required or may reasonably be necessary for the safe keeping of the works and premises. The Contractor shall be held responsible for the safety and security of the works during the whole term of the Contract.				
	Protecting the Works				
110	Allow for protecting the whole of the works during the contract period.				
111	The Contractor must particularly note that he will be required to protect the existing structure against inclement weather whilst work is being undertaken and particularly to roofs.				
112	Any existing grassed or paved areas damaged by the Contractor, must be made good at his expense.				
113	Subject to any specific item or items measured elsewhere in these Schedule of Works, the Contractor shall adequately cover up and protect from damage all areas outside the boundaries of the site which are subject to traffic by him and clear all such protection away and make good any damage caused on completion.				
114	The Contractor shall give notice in writing to the Contract Administrator seven days prior to commencing any work which affects adjoining property, public roads or footpaths, or Public Utility Services.				
115	No cutting through walls, floors and the like is to be executed other than that shown on the drawings. The Contractor will be held responsible for all damage arising through his or his Sub-Contractors' carelessness or neglect.				

		Fixed Charge		Time Related Charge	
		£	p	£	p
A42	**CONTRACTOR'S GENERAL COST ITEMS: SERVICES AND FACILITIES (CONT'D)**				
	Water for the Works				
116	Allow for providing water for the works including tapping the supply mains, providing meters and all temporary plumbing required, paying all fees and water rates in connection therewith and clearing away on completion.				
	Lighting and Power for the Works				
117	Allow for providing all necessary temporary lighting and power required for the execution and protection of the works including temporary connection, the cost of electric current and distribution about the site. All temporary power supplies are to be metered.				
118	Temporary connections to existing services are to be made in a manner to be approved by the Local Authority.				
	Temporary Telephone				
119	The Contractor shall arrange for and provide a telephone to the office of the Person-in-Charge and he shall be responsible for and pay all charges in connection with and for continuing and keeping the installation in good order and condition during the Contract.				
	Safety, Health and Welfare of Workpeople				
120	Allow for all welfare and such safety measures and amenities to a standard not inferior to that laid down in Schedule 2 of the CDM Regulations 2015 and the Health and Safety at Work etc Act 1974 for all workpeople employed on the site including the employees of Sub--Contractors and for maintaining and removing same on completion.				
121	Sanitary accommodation so provided shall be connected to a soil drainage system whenever possible and the Contractor shall allow for making the necessary temporary connections, removal and making good all work disturbed.				
122	Sanitary accommodation so provided may be the toilets in the existing building and the Contractor must allow for keeping clean and making good any damage on completion.				
	Maintenance of Roads				
123	The Contractor shall ensure that vehicles and plant leave the site free of mud, etc and take all other precautions necessary to maintain and keep public and private roads free from mud, debris, etc during the course of the Contract and make good any damage.				

		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
A42	**CONTRACTOR'S GENERAL COST ITEMS: SERVICES AND FACILITIES (CONT'D)**				
	Drying the Works				
124	Allow for providing all necessary temporary heating including fuel which may be required to enable the works to proceed at all times including that required to enable operatives to work during inclement weather, to protect the works from damage due to frost and to enable trade to follow trade. Use of any permanent heating system will not be allowed without the consent of the Contract Administrator. The Contractor will not be reimbursed for the cost of any heating he provides for drying out screeds, plasterwork or other sections of the work where such heating is necessary to allow progress by following trades, or for heating he provides to protect parts of the works liable to damage or deterioration, or for drying out the structure made necessary due to his failure to protect the works from inclement weather. Note: any heating required for drying specific areas of the works or to maintain specific humidity levels, if required, has been included for elsewhere as an obligation imposed by the Employer.				
	Rectification Period – Rectification of Defects				
125	Notwithstanding the requirements of the Contract regarding the Contractor's responsibility to attend to building and building services related defects during the Rectification Period, the Contractor shall guarantee a minimum response time of three days to address any failures of building services related plant or equipment.				
126	Failure to achieve the above response times will permit the Employer to instruct others to carry out any maintenance or service related activities in order to re-establish full operation of the building services elements and to deduct any costs incurred from the retention withheld during the Rectification Period.				
A43	**CONTRACTOR'S GENERAL COST ITEMS: MECHANICAL PLANT**				
	Plant, Tools and Vehicles				
127	Allow for providing all necessary plant, tools and vehicles.				
	Transport for Workpeople				
128	Allow for all costs involved in transporting workpeople to and from the site.				

		Fixed Charge		Time Related Charge	
		£	p	£	p
A44	**CONTRACTOR'S GENERAL COST ITEMS: TEMPORARY WORKS**				
	General Scaffolding				
129	Allow for providing, erecting, altering and adapting, as necessary, dismantling and finally clearing away all scaffolding necessary for the proper execution and easy access to the works.				
130	The Contractor is to allow for all notices, temporary lighting and safety requirements to allow tenants and others proper access into and around the buildings.				
131	The Contractor will be required to submit his scaffolding proposals and design details to the Contract Administrator before commencing the works and supply a Certificate from a member of the Institute of Structural Engineers indicating that the scaffolding complies in all respects with the relevant Codes of Practice and safety requirements including BS 5973: 1981 Code of Practice for access and working scaffolds and special structures in steel. Any alterations to the scaffolding, etc are to be additionally certified. The Contractor must allow for all costs in connection with complying with these requirements.				
132	Where scaffold is being erected on or near a public footpath or thoroughfare, effective measures, including warning signs and barriers, shall be taken to exclude the general public from the area. This shall also apply when dismantling scaffold.				
133	Where scaffold is erected on or near a footpath or public thoroughfare or close to adjacent buildings, it shall be netted and comply with BS Code of Practice 93, the first 2 m in height of scaffold is to be painted white. In addition, protective overhead fans are to be provided over public entrances and footpaths comprising double boarding with 1000 gauge polythene sheeting between and raised up toeboard. Lights, signs and notices shall be provided warning of the danger of men working overhead. If weather covers or other sheeting materials are to be attached to a scaffold the Contractor must take into consideration the additional wind loading imposed.				
134	No scaffold is to erected on the roof of any adjoining buildings. The Contractor must provide all necessary temporary support and protection work and must make good any damage on completion of the works to the satisfaction of the Contract Administrator.				

		Fixed Charge		Time Related Charge	
		£	p	£	p
A44	**CONTRACTOR'S GENERAL COST ITEMS: TEMPORARY WORKS (CONT'D)**				
	General Scaffolding (Cont'd)				
135	Where scaffolding requires protection from lightning strike (in accordance with the recommendation of IEE Regulations 541-2 (Note) 17th Edition and BS Code of Practice 6651: 1985 'Protection of Structures against Lightning' special reference to clause 26.2 and 31) they shall be certified by a qualified Electrical Engineer at commencement with regular testing and certification at not less than monthly intervals and additionally when alterations to scaffolding are carried out. The Certificates are to be supplied to the Contract Administrator. The Contractor must allow for all costs in connection with complying with these requirements.				
136	At the end of each working day, all ladders or other means of access must be removed and the scaffolding, as far as possible, rendered unclimbable. The Contractor is to take special precautions to any areas vulnerable to climbing.				
137	All external scaffolding to be fitted with scaffold alarm systems.				
	Temporary Fencing, Hoarding, Screens, Fans, Planked Footways, Guard Rails, Gantries, Etc				
138	Allow for providing all temporary fencing, hoarding, screens, fans, planked footways, guard rails, gantries and other similar items which the Contractor considers necessary to protect the works and the public, for the proper execution of the works and for meeting the requirements of any local or other authority. Note: any temporary fencing, hoardings, etc specifically required by the Employer has been included under Clause A36.				
	Temporary Roads, Etc				
139	Allow for providing and maintaining any temporary roads, tracks, hardstandings, crossings and the like for the proper execution of the works and for access to the site and clearing away on completion. Give all notices, obtain all consents and pay all fees in connection therewith.				
	Traffic Regulations				
140	Allow for complying with all traffic, police or similar regulations which, from time to time, may be in force and which may affect operations on or about the site.				

To Collection £

		Fixed Charge		Time Related Charge	
		£	p	£	p
	COLLECTION				
	Page Nr 1/1				
	Page Nr 1/2				
	Page Nr 1/3				
	Page Nr 1/4				
	Page Nr 1/5				
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		Fixed Charge £	Fixed Charge p	Time Related Charge £	Time Related Charge p
	Brought Forward £				
	COLLECTION (CONT'D)				
	Page Nr 1/29				
	Page Nr 1/30				
	Page Nr 1/31				
	Page Nr 1/32				
	Page Nr 1/33				
	Page Nr 1/34				
	Page Nr 1/35				
	Page Nr 1/36				
	Page Nr 1/37				
	Page Nr 1/38				
	£		£		
	ADD Fixed Charge		£		
	BILL NR 1 – PRELIMINARIES To Main Summary		£		

BILL NR 2

MATERIALS AND WORKMANSHIP

POTTER RAPER PARTNERSHIP

40-46 Sweyn Road, Margate

08 March 2016

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C
Demolition/ Alteration/ Renovation

C11 Site investigation

To be read with Preliminaries/ General conditions.

GENERAL REQUIREMENTS

140 ACCESS TO THE SITE
- Details: Thanet District Council.
- Contact: Ashley Stacey.

150 PUBLIC SAFETY
- Protection of the public and occupiers of adjoining property: Erect temporary fences, hoardings, footpaths, warning lights, etc. before starting work.
- Means of escape from adjoining property in the event of fire: Maintain for the duration of the Works.
- Specific hazards which may be encountered: Basement areas, removal of fire damaged structures.

160 SITE SAFETY
- Excavations and boreholes: Support sides and keep free from ground and surface water.
- Protection: Contractor's choice.

180 COMPETENCE
- Skill and experience: Appropriate for the type of work.
  - Evidence: Submit prior to commencement.

190 PROTECTION
- Protect the following: Existing structures that are to be retained.

INVESTIGATION

240 GROUND INVESTIGATION FOR DESIGN OF UNDERPINNING
- Requirement: Determine the soil profile, physical and chemical nature of the soils and the necessary design parameters.
- Standard: UK Specification for ground investigation (SFGI) published by the Institution of Civil Engineers Site Investigation Steering Group.
  - Definitions: For the purpose of this contract interpret references to the Engineer as being to the person named in section A10 as administering the contract on behalf of the Employer and Reference to a schedule to be taken as referring to this specification.
- Amendments to standard: Information required by the contractor under clause 3.3 and schedule S1.5 to be determined in the desk study.
  - Substitutions for reference documents: None.
- Method:
  - Exploratory holes: Trial pits and trenches.
  - Field testing: Submit proposals.
  - Sampling: Submit proposals.
    Quality class of samples: To suit requirements for testing.
  - Monitoring: None.
  - Laboratory testing: Submit proposals.
  - Reporting: Submit proposals.

250 TRIAL PITS AND TRENCHES

- Purpose: Visual examination and sampling from ground level.
- Locations: As indicated on Structural Engineer's drawings.
- Full depth: As indicated on Structural Engineer's drawings.
- Hand dig: As indicated on Structural Engineer's drawings.
- Minimum trench width: As indicated on Structural Engineer's drawings.
- Minimum base area of pits: As indicated on Structural Engineer's drawings.
- Protection: Submit proposals.
- Backfill material: Submit proposals.
- Reinstatement: Submit proposals.

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. Extent: As per drawings .
  - 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.
  - Special requirements:
  - Details of services supplied by the Statutory Authority;Thanet District Council
  - Disposal methods for gypsum-based products;
  - Results of tests to determine the precise nature of hazardous materials;
  - Site waste management plan development and proposals; and - Structural calculations in support of method statements .
- Format of report: NR .

120 EXTENT OF DECONSTRUCTION/ DEMOLITION

- General: Subject to retention requirements specified elsewhere, deconstruct/ demolish structures down to levels as shown on demolition drawing B7341/C.1.02 .

130 GROUNDWORKS

- Old foundations, slabs and the like: Break out in locations and to the extents stated.
- Contaminated material: Remove, and carry out remediation required by the Enforcing Authority.

140 BENCH MARKS

- Unrecorded bench marks and other survey information: Give notice when found. Do not remove marks or destroy the fabric on which they are found.

150 FEATURES TO BE RETAINED

- General: Keep in place and protect the following:
  - Boundary walls;
  - Gates and gate pillars; and
  - Railings.

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.
- Other requirements: Post completion camera survey; extent tba.

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.

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.

360 STRUCTURES TO BE RETAINED
- Extent: As per demolition drawing B7341/C.1.02 .
- Parts which are to be kept in place: Protect.
- Interface between retained structures and deconstruction/ demolition: Cut away and strip out with care to minimize making good.

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.

390 ASBESTOS-CONTAINING MATERIALS – KNOWN OCCURRENCES
- General: Materials containing asbestos are known to be present in: Re Asbestos Survey.
- Removal: By contractor licensed by the Health and Safety Executive, and prior to other works starting in these locations.

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.

430 FILLING OF BASEMENTS, ETC
- Temporary support: Leave adequate buttress walls or provide temporary support to basement retaining walls up to ground level.
- Water movement: Make holes in basement floors to allow water drainage or penetration (depending on water table). Provide a hole for every 10 m², not less than 600 mm in diameter.
- Filling: Remove organic material and soil from basements and other voids. Fill and consolidate with granular material in accordance with local Highway Authority requirements .

442 SITE SURFACE AT COMPLETION
- Levels: Grade the site to follow the levels of adjacent areas.
- Temporary surface: Cover the site with 100 mm thick consolidated layer of crushed hard rock in areas shown on drawing .

450 SITE CONDITION AT COMPLETION
- Debris: Clear away and leave the site in a tidy condition.
- Other requirements: Tba On Site.

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.

511 EMPLOYER'S PROPERTY
- Components and materials to remain the property of the Employer: tba.
- Protection: Maintain until these items are removed by the Employer or reused in the Works, or until the end of the Contract.
- Special requirements: tba.

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.

C41 Repairing/ Renovating/ Conserving masonry

To be read with Preliminaries/ General conditions

GENERALLY/ PREPARATION

110 SCOPE OF WORK
- Schedule: as per bill No. 3.
- 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.
- Parties involved:
  - Contract administrator;
  - Contractor's representative; and
  - Structural engineer.
- Timing: At least 3 working days before starting each section of work.
- Instructions issued during inspection: Confirm in writing, with drawings and schedules as required, before commencing work.

125 REMOVAL OF FITTINGS/ FIXTURES
- Items to be removed, and reinstated on completion of repair work: tba.
  - Identification: Attach labels or otherwise mark items using durable, non-permanent means, to identify location and describe refixing instructions, where applicable.
  - Treatment following removal: As schedule.
  - Storage: Protect against damage, and store until required.
    Storage location: On site.
  - Reinstatement: Refit in original locations using original installation methods.
- Items unsuitable or not required for reuse: tba.
  - Disposal: Obtain instructions.
- 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.
- Specific records: TBA.
- Documentation: Submit on completion of the work.
  - Number of sets: One.

WORKMANSHIP GENERALLY

150 POWER TOOLS
- Usage for removal of mortar: Permitted only with prior approval .

155 PUTLOG SCAFFOLDING
- Usage: Not permitted .

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

260 BRICKS
- Manufacturer: Contractors Choice.
  - Product reference: London Stock.
- Size: STANDARD.
- Special shapes: N/A.
- Recycled content: Contractor's choice.

265 SALVAGED AND SECOND HAND BRICKS
- Source: Existing cracked bricks removed, cleaned, bonded with approved epoxy resin adhesive and reused.
- Condition:
  - Free from matter such as mortar, plaster, paint, bituminous materials and organic growths.
  - Sound, clean and reasonably free from cracks and chipped arrises.

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 Repairs and stitch in
- Bricks: Clay as clause 260.
- Mortar: As section Z21.
  - Mix: TBA.
  - Sand source/ type: building sand.
- Fixings: wall ties and frame ties.
- Joints: as existing.
- Other requirements: None.

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.

410 CORRODED METAL FIXINGS
- Removal: Cut out carefully, causing the least possible disturbance to surrounding masonry. Remove associated rust debris.
- Replacement: Compatible fixings as clause Railings.

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 locations variable

- Mortar: As section Z21.
  - Mix: 1:3:12 white cement:lime:sand.
  - Sand source/ type: building sand.
- 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: None.

GROUTING RUBBLE FILLED CORES

710 PREPARATION FOR GROUTING

- Grouting holes: Drill in joints at horizontal and vertical centres to suit coursing and to achieve an effective distribution of grout so that, on completion, all voids in masonry are filled.
- Maximum height of each grout pour: Regulate to prevent disruption to masonry.
- Open joints in masonry: Seal with an approved temporary material to prevent leaking of grout. Leave weep holes every two or three courses to assist in flushing out dust and debris, and to prove effectiveness of grouting. Locate temporary seal back from facework to allow for specified repointing. Seek instructions if repointing precedes grouting.

712 FLUSHING OUT

- Timing: Before grouting.
- Requirement: Flush out core of masonry walls using clean water delivered under moderate pressure through grouting holes.

720 HAND GROUTING TO EXTERNAL WALLS

- Grout mix: 1:2:0.5:4 nonhydraulic lime: pulverised fuel ash: white cement:blended sands, subject to site trials.
- Method: Direct grout into open joints using clay cups formed against masonry surface. Pour grout to refusal; allow to set; break off excess mortar and brush down masonry face.

740 APPLICATION OF GROUTING

- Grouting: Continuous operation during each lift. Allow grout to set before commencing subsequent lifts.
- Monitoring: Monitor grouting carefully and continuously at each delivery point (flow and delivery pressure), and at adjacent/ opposite wall faces, to ensure that there is an effective distribution of grout with no leaking, staining, or disruption to the masonry.
- Temporary seals: Remove on completion of grouting and leave joints in a suitable condition for repointing.

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 twice joint thickness .
  - 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.

820 POINTING STONEWORK GENERALLY

- Preparation of joints: Dampen joints, as necessary, to control suction.
- Mortar: As section Z21.
  - Mix: 1:3:12 white cement:lime:sand.
  - Sand source/ type: Crushed stone fine pointing sand to approval.
- Joints profile/ finish: Recessed back from weathered arrises to retain original joint widths. Brushed finish as clause 860.
- Other requirements: Grout deep voids as clause 720.

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.

850 POINTING WITH INJECTION MORTAR

- General: Inject mortar into joints so that they are fully filled with no voids.
- Face of masonry: Keep clear of mortar. Finish joints neatly.

860 BRUSHED FINISH TO JOINTS

- Timing: After initial mortar set has taken place remove laitance and excess fines by brushing, to give a coarse texture. Do not compact mortar.

C45 Damp proof course renewal/ insertion

To be read with Preliminaries/ General conditions.

110 PRECONTRACT SURVEY
- General: A survey has been carried out and the report is available for inspection.
- Survey limitations: Areas not surveyed as identified in report.

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 courses 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: Carry out as part of main contract works.

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.

151 REMOVAL OF EXTERNAL RENDER
- Extent of removal (maximum): 150 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.

210 CHEMICAL INJECTION DPC SYSTEM
- System: Agrément certified.
  - Product type: Injection mortar.
- Installation: In accordance with BS 6576 by a registered member of the Property Care Association.

220 CHEMICAL INJECTION DPC SYSTEM
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Installation: In accordance with BS 6576 by a firm approved by the dpc system manufacturer .

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 or 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.

C52 Fungus/ beetle eradication

To be read with Preliminaries/ General conditions.

105 PRECONTRACT SURVEY
- General: A survey has been carried out and the report is available for inspection.

115 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 investigation methods.
  - 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.

120 ASSOCIATED WORK
- Work shown to be necessary by survey: Carry out as part of main contract works for 40-46 Sweyn Road.

140 OPENING UP/ CUTTING OUT/ REMOVAL OF BUILDING FABRIC
- Extent: Submit proposals.
- Retained building fabric: Maintain stability and do not damage.

150 DRYING OUT OF BUILDING FABRIC
- Drying conditions: Establish as soon as possible.
- Drying methods: Submit proposals for achieving effective permanent ventilation.

162 PREPARATION GENERALLY FOR PRESERVATIVE/ FUNGICIDE TREATMENTS TO TIMBERS/ MASONRY
- Furnishings/ components/ finishes within treated areas: Prevent staining and other adverse effects.
- Water supplies: Do not contaminate.
- Electrical equipment and supplies: Isolate circuits as required and prevent ingress of treatment fluids.
- Cleanliness: Remove loose material, dust and debris from surfaces to be treated.

210 DRY ROT

- Fruiting bodies: Do not disturb. If heat treatment is not employed, spray with fungicide.
  - Removal: Remove carefully. Clean surfaces.
- Infected material to be removed: Remove carefully, causing minimum disturbance and damage to adjacent building fabric; dispose of safely at a tip approved by a waste regulation authority. Prevent contamination of other parts of the building.
- Infected material to be retained: Treat with penetrative preservative.

220 WET ROT

- Decayed timber to be removed: Cut out until sound timber is reached.
  - Disposal of previously treated timber: At a tip approved by a waste regulation authority.
- Decayed timber to be retained: Obtain instructions.

230 BEETLE INFESTATION

- Infected timber: Cut, scrape and trim back to sound timber where heat treatment is not employed. Remove debris immediately and dispose of safely at a tip approved by a waste regulation authority. Prevent contamination of other parts of the building.

240 SALVAGED MATERIALS

- Sound, uninfected materials: Give notice before reusing/ recycling.

310 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 as manufacturers' recommendations.

355 DRILLING TIMBER FOR INJECTION OF PRESERVATIVES

- Sizes and location of holes: Submit proposals.
- Sealing holes after treatment: Submit proposals.
- Approval of appearance: Obtain approval of first few holes before completing remainder.

390 GUARANTEE

- Type: Insurance 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.

H
Cladding/ Covering

H32 Plastics profiled sheet cladding/ covering

To be read with Preliminaries/ General conditions.

TYPES OF CLADDING/ COVERING SYSTEM

111 PVC-U facia and soffits
- Humidity load: To BS EN ISO 13788, class: 1.
- Support structure: Timber.
  - Pitch: Fat/level.
- Spanning form: Single.
- System type: Single skin..
  - Material: PVC-U to BS 4203.
  - Profile: square edged.
  - Length: as required.
  - Cover width: timber joists depth.
- Light diffusion: Type A.
- Finish/ Colour: black.
- Fire properties:
  - Exposure performance to BS 476-3: Category n/a.
  - Surface spread of flame to BS 476-7: Class n/a.
- Safety:
  - Fragility class to ACR(M)001: A.
  - Safety glazing classification to BS 6206: Class A.
- Accessories: None.
- Primary sheet fasteners: screwed.
  - Fastener profile location: face.
  - Number of fasteners per sheet width at eaves, end laps and intermediate supports: As clause 6 00mm .
- End laps size (minimum): butt joins.
  - Sealing: As clause 330.
- Side laps:
  - Sealing: As clause 330.
  - Stitching: n/a.
- Maximum unsupported overhang: 50mm.
- U-value (plane): n/r.
- Special features: None.

GENERAL REQUIREMENTS

165 FASTENER SAMPLES
- General: During detailed design, submit labelled samples of each type of fastener.

DESIGN/PERFORMANCE REQUIREMENTS

191 WATER PENETRATION
- Requirement: Under site exposure conditions moisture must not penetrate onto internal surfaces, or into cavities not designed to be wetted.

FIXING CLADDING/ COVERING

210 PAINTING STRUCTURE
- Sequence: Paint outer surface of supporting structure before fixing cladding/ covering.

213 FASTENERS
- Unspecified fasteners: Recommended for the purpose by the cladding/ covering manufacturer.

217 ACCESSORIES
- Unspecified accessories: Recommended for the purpose by the cladding/ covering manufacturer.

220 PROFILE FILLERS
- Types: Supplied by cladding/ covering manufacturer accurately matching sheet profile.
  - Material/ colour: Closed cell cross linked EP/ black.
- Locations: As shown on drawings, on the line of or above, fasteners and wherever necessary to close off profile cavities from the outside and inside of the building.
- Fit: Tight with no gaps.
- Profile fillers in sealed laps: Bed in sealant on top and bottom surfaces.

230 FIXING SHEETS GENERALLY
- Cut edges: Clean true lines.
- Sheet orientation: Exposed joints of side laps away from prevailing wind unless shown otherwise on drawings.
- Fastener hole location: At regular intervals in straight lines and not less than 50 mm from edges of sheets and fittings.
- Crown fixing: For sheets with a profile depth greater than 20 mm support crowns at primary fixings with profile fillers.
- Debris: No dust or foreign matter to be present within construction.
- Fasteners torque: Sufficient to correctly compress washer.
- On completion: Fixings to be watertight and sheets secure with no buckling or distortion.

240 MULTIPLE SKIN CONSTRUCTION
- Liner, intermediate and outer sheet fixing: No distortion will be accepted.
- Inaccessible surfaces: To be clean.
- Inner and outer sheet laps: Sealed.

260 ACCOMMODATION OF THERMAL MOVEMENT
- PVC-U and polycarbonate sheets: Use oversize holes for primary fixings in accordance with sheet manufacturer's recommendations.

320 ABUTMENTS
- Junctions with flashings: Watertight and neatly dressed.

330 SEALING LAPS
- Sealant tape: Types recommended for the purpose by sheet manufacturer.
- End laps: Position sealant tape in straight, unbroken lines below fixing positions, parallel to and slightly back from edge of sheet.
- Side laps: Position sealant tape outside the line of fasteners. Where a second tape is specified, position on the other side of the fasteners.
- Laps between plastics sheets and other materials: Use sealant tape specified for other materials.
- Seal quality: Effective, continuous and not overcompressed.

340 WARNING NOTICES

- Fixing locations of signs: as required.
- Manufacturer: contractors choice.
  - Product reference: Fire escape signs.
  - Material: Polycarbonate with subsurface printing .
- Signs description:
  Warning sign as BS 5499-5 code 8.C.0072 with supplementary text sign, lettering 'DANGER Fragile roof'.
  Mandatory sign as BS 5499-5 code 11.A.0103 with supplementary text sign, lettering 'Use crawling boards'.

H60 Plain roof tiling

To be read with Preliminaries/General conditions.

TYPES OF TILING

120 CONCRETE ROOF TILING TO PITCHED ROOF

- Substrate: Plywood sarking on rafters at approx. 305 mm centres.
- Pitch: 35°.
- Underlay: Reinforced bitumen membrane to BS 8747, type 1F.
  - Recycled content: None permitted.
  - Direction: Parallel to eaves.
  - Head-lap (minimum): 75 mm.
- Battens:
  - Size: 50 x 25 mm.
  - Fixing: Aluminium 50 mm x 3.00 nails.
- Tiles: To BS EN 490, noninterlocking.
  - Manufacturer: Redland.
    Product reference: Redland 49.
  - Pattern: Smooth.
  - Colour: Red.
  - Size: 382 x 226 mm.
  - Recycled content: None permitted.
  - Head-lap (minimum): 65 mm.
  - Fixing:
    Fixing of local areas: 2 No. nails at top, 1 No. clips at the base.
    Fixing of general areas: 2 No. nails at top, 1 No. clips at the base.
- Accessories: Clips as above.

121 INTERLOCKING CONCRETE ROOF TILING TO PITCHED ROOF

- Substrate: Plywood sarking on rafters at approx. 305 mm centres.
- Pitch: 35°.
- Underlay: Reinforced bitumen membrane to BS 8747, type 1F.
  - Recycled content: None permitted.
  - Direction: Parallel to eaves.
  - Head-lap (minimum): 75 mm.
- Battens:
  - Size: 50 x 25 mm.
  - Fixing: Aluminium 50 mm x 3.00 nails.
- Tiles: To BS 5535 for fixing, BS 5250 for ventilation.
  - Manufacturer: Redland.
    Product reference: Redland 49.
  - Pattern: Smooth.
  - Colour: Red.
  - Size: 382 x 226 mm.
  - Recycled content: None permitted.
  - Head-lap (minimum): 65 mm.
  - Fixing:
    Fixing of local areas: 2 No. nails at top, 1 No. clips at the base.
    Fixing of general areas: 2 No. nails at top, 1 No. clips at the base.
- Accessories: Clips as above.

TILING GENERALLY

210 BASIC WORKMANSHIP
- General: Fix tiling and accessories to make the whole sound and weathertight at earliest opportunity.
- Setting out: To true lines and regular appearance, with neat fit at edges, junctions and features.
- Fixings for tiling accessories: As recommended by tile or accessory manufacturer.
- Gutters and pipes: Keep free of debris. Clean out at completion.

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

240 UNDERLAY
- Handling: Do not tear or puncture.
- Laying: Maintain consistent tautness.
- Vertical laps (minimum): 100 mm wide, coinciding with supports and securely fixed.
- Fixing: Galvanized steel, copper or aluminium 20 x 3 mm extra large clout head nails.
- Eaves: Where exposed, underlay must be BS 8747, Annex B, type 5U, or equivalent UV durable type.
- Penetrations: Use proprietary underlay seals or cut underlay to give a watertight fit around pipes and components.
- Ventilation paths: Do not obstruct.

245 BATTENS/ COUNTERBATTENS - TREATED
- Timber: Sawn softwood.
  - Species: To BS 5534, clause 4.12.1.
  - Permissible characteristics and defects: Not to exceed limits in BS 5534, Annex C.
  - Grading: Fully factory pre-graded.
  - Moisture content at time of fixing and covering (maximum): 22%.
- Preservative treatment: As section Z12 and Wood Protection Association Commodity Specification C8.
  - Type: Contractor's choice.

265 BATTEN FIXING
- Setting out: Align parallel to straight edge in straight horizontal lines to gauge of tiles. Align on adjacent areas.
- Batten length (minimum): Sufficient to span over three supports.
- Joints in length: Square cut. 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.
- Fixing: Each batten to each support. Splay fix at joints in length.

275 TILE FIXING
- Setting out: Lay tiles to a half lap bond with joints slightly open. Align tails.
- 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:
  - Verges, abutments and each side of valleys and hips: Twice nail end tile in every course.
  - Eaves and top edges: Twice nail two courses of tiles or clip as appropriate.
- Fixings for tiles: Nails/clips recommended by tile manufacturer.

ROOF TILING EDGES/ JUNCTIONS/ FEATURES

305 GENERALLY

- Fittings and accessories: As recommended by tile manufacturer, do not improvise.
  - Exposed fittings and accessories: To match tile colour and finish.
- Cut tiles: Cut only where necessary, to give straight, clean edges.
- Flashings: Fix with or immediately after tiling. Form neatly.

325 FIRE SEPARATING WALLS

- Separating walls: 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, fixed to rafters and carefully cut to shape to provide fire stopping.

345 VENTILATED EAVES WITH INTEGRATED GRILLES/ TRAYS

- Fascia grilles and ventilator trays:
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Fix to carry underlay, form drip into gutter and provide free passage of air over insulation.
- Undercourse and first course tiles: Fix with tails projecting 50 mm over gutter or to centre of gutter, whichever dimension is the lesser.

435 CLOAKED VERGES

- Underlay and tiling battens: Carry over full width of verge. Project underlay to turn down behind verge tiles.
- Cloaked verge tiles:
  - Product reference: Contractor's choice.
  - Projection beyond face of wall (maximum): 50 mm.
  - Fixing: Nails and clips.

445 MORTAR BEDDED VERGES WITH BEDDED UNDERCLOAK

- Underlay: Carry 50 mm onto outer leaf of gable wall and bed on mortar.
- Undercloak: Matching plain tiles.
  - Position: Over underlay, level with underside of tiling battens, sloping towards verge.
  - Projection beyond face of wall: 38-50 mm.
  - Bedding: On mortar identical to that used in gable walling.
- Tiling battens: Carry onto undercloak and finish 100 mm from verge edge.
- Verge tiles:
  - Bedding: Flush with undercloak on 75 mm wide bed of mortar.
  - Fixing: Nails. Do not displace or crack mortar.

H71 Lead sheet coverings/ flashings

To be read with Preliminaries/ General conditions.

TYPES OF LEADWORK

110 ROOFING Main Roof.Bay roof stepped flashing
- Substrate: Brick.
  - Preparation: Lay18 mm WPB plywood.
- Underlay: Ubiflex.
- Type of lead: UBiflex.
  - Thickness: as required).
- Pretreatment: N/R .
- Joints in direction of fall: Hollow rolls.
  - Spacing: Regular, not more than 1200 mm.
- Eaves detail: N/R.
- Cross joints: 150 mm laps.
  - Spacing: Regular, not more than 1200 mm.
  - Alignment: Square.
- Intermediate fixings: Zinc tingles.
- Ridge/ Hip detail: note required.
- Accessories: As manufacturer details.

230 VALLEY GUTTER LINING TO SLATE/ TILE ROOFS
- Underlay: Breathable felt.
- Type of lead: Ubiflex.
  - Thickness: as required).
- Pretreatment: N/R.
- Laying: Over and beyond tilting fillets.
- Lengths: Not more than 1500 mm.
  - Cross joints: Lapped not less than 150 mm.
- Fixing: Welt edges. Nail top edge of each sheet. Dress bottom end neatly into eaves gutter.

250 WEATHERING TO SHALLOW BAY WINDOWS
- Substrate: Plywood on rafters.
- Underlay: Breathable Felt.
- Type of lead: Ubiflex.
  - Thickness: as required).
- Joints: Laps (100 mm minimum).
  - Spacing: 1500 mm.
- Edge details: Welted drip at front, upstand at rear with tuck in .
- Fixing: Zinc clips at 500 centres.
- Accessories: Lead mastic to upstands.

420 COVER FLASHINGS TO BITUMEN SHEET FLAT ROOF
- Lead:
  - Thickness: ubiflex).
- Dimensions:
  - Lengths: Not more than 1500 mm.
  - End to end joints: Laps of not less than 100 mm.
  - Cover: Overlap to upstand of not less than 75 mm.
- Fixing: Zinc wedges into bed joint, clips to lead upstand at laps and 500 mm centres.

440 SOAKERS AND STEP FLASHINGS AT ABUTMENT

- Lead soakers:
  - Thickness: ubiflex).
  - Dimensions:
    Length: Slate/ tile gauge + lap + 25 mm.
    Upstand: Not less than 75 mm.
    Underlay: Not less than 100 mm.
  - Fixing: By roofer.
- Lead step flashings:
  - Thickness: Ubiflex).
  - Dimensions:
    Lengths: Not more than 1500 mm.
    End to end joints: Laps of not less than 100 mm.
    Cover: Overlap to soaker upstands of not less than 65 mm.
  - Fixing: Lead wedges at every course.

473 CHIMNEY FLASHINGS TO SLATE/ PLAIN TILE ROOFS

- Lead front apron:
  - Thickness: as Ubiflex recomendations).
  - 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 150 mm.
  - Fixing: Lead wedges into bed joint.
- Lead soakers:
  - Thickness: as Ubiflex requirements).
  - Dimensions:
    Length: Slate/ tile gauge + lap + 25 mm.
    Upstand: Not less than 75 mm.
    Underlap: Not less than 100 mm.
- Lead step flashings:
  - Thickness: Ubiflex).
  - Dimensions:
    Lengths: Not more than 1500mm.
    End to end joints: Laps of not less than 100 mm.
    Front end: Turn 75 mm around chimney over apron.
    Cover: Overlap to soaker upstands of not less than 65 mm.
  - Fixing: Lead wedges at every course.
- Lead back gutter:
  - Thickness: Ubiflex).
  - 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.
- Lead back gutter cover flashing:
  - Thickness: Ubiflex).
  - Dimensions:
    Length: Width of chimney plus not less than 100 mm overlap to each side flashing.
    Cover: Overlap to back gutter upstand of not less than 75 mm.
  - Fixing: Lead wedges into bed joint.

GENERAL REQUIREMENTS/ PREPARATORY WORK

510 WORKMANSHIP GENERALLY

- Standard: To BS 6915 and latest edition of 'Rolled lead sheet. The complete manual' published by the Lead Sheet Association.
- Fabrication and fixing: To provide a secure, free draining and completely weathertight installation.
- Operatives: Trained in the application of lead coverings/ flashings. Submit records of experience on request.
- Preforming: Measure, mark, cut and form lead prior to assembly wherever possible.
- Marking out: With pencil, chalk of crayon. Do not use scribers or other sharp instruments without approval.
- Bossing and forming: Straight and regular bends, leaving sheets free from ripples, kinks, buckling and cracks.
- Solder: Use only where specified.
- Sharp metal edges: Fold under or remove as work proceeds.
- Finished work: Fully supported, adequately fixed to resist wind uplift but also able to accommodate thermal movement without distortion or stress.
  - Protection: Prevent staining, discolouration and damage by subsequent works.

515 LEADWELDING

- In situ leadwelding: Not permitted.

516 LEADWELDING

- In situ leadwelding: Is permitted, subject to completion of a 'hot work permit' form and compliance with its requirements.

520 LEAD SHEET

- Production method:
  - Rolled, to BS EN 12588, or
  - Machine cast and BBA certified, or
  - Sand cast, from lead free from bitumen, solder, other impurities, inclusions, laminations, cracks, air, pinholes and blowholes; to code thicknesses but with a tolerance (by weight) of ±10%.
- Identification: Labelled to show thickness/ code, weight and type.

555 LAYOUT

- Setting out of longitudinal and cross joints: Submit proposals.

610 SUITABILITY OF SUBSTRATES

- Condition: Dry and free of dust, debris, grease and other deleterious matter.

620 PREPARATION OF EXISTING TIMBER SUBSTRATES

- Remedial work: Adjust boards to level and securely fix. Punch in protruding fasteners and plane or sand to achieve an even surface.
- Defective boards: Give notice.
- Moisture content: Not more than 22% at time of covering. Give notice if greater than 16%.

630 PLYWOOD UNDERLAY

- Standard: Manufactured to an approved national standard and to BS EN 636, section 8 (plywood for use in humid conditions).
  - Sheet size: 2400 or 1200 x 1200 mm and 6 mm thick.
- Moisture content: Not more than 22% at time of covering. Give notice if greater than 16%.
- Laying: Cross joints staggered and a 0.5 to 1 mm gap between boards.
- Fixing: With 25 mm annular ringed shank copper or stainless steel nails, at 300 mm grid centres over the area of each sheet and at 150 mm centres along edges, set in 10 mm from perimeter edges.
  - Nail heads: Set flush or just below the surface.

640 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.

650 LAYING 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 but do turn up at abutments.
  - Wood core rolls: Fixed over underlay.
  - Protection: Keep dry and cover with lead at the earliest opportunity.

FIXING LEAD

705 HEAD FIXING LEAD SHEET

- Top edge: Secured with two rows of fixings, 25 mm and 50 mm from top edge of sheet, at 75 mm centres in each row, evenly spaced and staggered.
- Sheets less than 500 mm deep: May be secured with one row of fixings, 25 mm from top edge of sheet and evenly spaced at 50 mm centres.

710 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.
  - Shank diameter: Not less than 2.65 mm for light duty or 3.35 mm for heavy duty.
  - Length: Not less than 20 mm or equal to substrate thickness.
- Screws to concrete or masonry substrates: Brass or stainless steel to BS 1210, tables 3 or 4.
  - Diameter: Not less than 3.35 mm.
  - Length: Not less than 19 mm.
  - Washers and plastic plugs: Compatible with screws and lead.
- Screws to composite metal decks: Self tapping as recommended by the deck and lead manufacturer/ supplier for clips.

765 CONTINUOUS CLIPS FOR CROSS JOINTS IN ROOFING

- Lead continuous clips: 50 mm wide, cut from sheets of same thickness/ code as sheet being secured.
- Fixing clips: Leadweld top edge of clips to underlap sheet, 50 mm from lower edge of overlap.
- Fixing lead sheet: Welt edge around continuous clip and dress down.

770 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.
- Sealant: Submit proposals.
  - Application: As section Z22.

JOINTING LEAD

810 FORMING DETAILS
- Method: Bossing or leadwelding except where bossing is specifically required.
- Leadwelded seams: Neatly and consistently formed.
  - Seams: Do not undercut or reduce sheet thickness.
  - Filler strips: Of the same composition as the sheets being joined.
  - Butt joints: Formed to a thickness one third more than the sheets being joined.
  - Lap joints: Formed with 25 mm laps and two loadings to the edge of the overlap.
- Bossing: Carried out without thinning, cutting or otherwise splitting the lead sheet.
  - Details where bossing must be used: Not applicable .

950 PLAQUES - EXISTING
- Existing plaques/ inscriptions: Retain and refix in approved locations by leadwelding along edges.

970 PATINATION OIL
- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Location: all lead.
- Application: As soon as practical, apply a smear coating to lead, evenly in one direction and in dry conditions.

POTTER RAPER PARTNERSHIP

J
Waterproofing

J31 Liquid applied waterproof roof coatings

To be read with Preliminaries/General Conditions.

TYPES OF COATING

120 WARM DECK ROOF COATING TO REAR ADDITIONS
- Substrate: Built up bitumen membrane covered plywood deck.
  - Preparation: Make good existing reinforced bitumen membrane (for use as vapour control layer).
- Vapour control layer: Determined by contractor.
- Insulation: Determined by contractor.
- Overlay to insulation: Softboard.
- Carrier membrane: As recommended by coating manufacturer.
- Waterproof coating: Bitumen emulsion.
  - System manufacturer: Agrément certified.
    Primer reference: contractors choice.
    Coating reference: liquid applied.
  - Application: Single coat ? kg/m².
  - Reinforcement: To general areas in embedment coat.
  - Minimum dry film thickness: 2 mm.
  - Colour: Grey.
- Surface protection: Blinding.
- Accessories: None.

PERFORMANCE

205 COMPLETION OF ROOFING DESIGN
- Description: As Preliminaries section A13.
- Requirement: Complete the detailed design to satisfy specified performance criteria and coordinate with the detailed design of related and adjacent work.
- Structural requirements: As section B50.
- Additional requirements: None.
- Design and production information: As Preliminaries section A31.
- Timing of submissions: As Preliminaries section A31.

207 ROOFING DESIGN PROVIDED
- Description: As Preliminaries section A13.
- Requirements:
  - Generally: As section B50.
  - Additional requirements: None.

210 ROOF PERFORMANCE
- General: Firmly adhered, free draining and weathertight.

230 INSULATION

- Requirement: Determine type and thickness of insulation and integral or separate overlay to satisfy the following criteria:
  - Thermal transmittance of roof (maximum): 0.25 W/m²K.
  - Compressive strength of insulation (minimum) at 10% compression: 220 kPa.
  - Substrate surface: Suitably even, stable and robust to receive roof coatings.
  - Insulation compliance: To a relevant British Standard, or Agrément certified.

PRODUCTS

315 TIMBER TRIMS

- Quality: Planed, free from wane, pitch pockets, decay and insect attack (except ambrosia beetle damage).
- Moisture content at time of covering (maximum): 22%.
- Preservative treatment: As drawing.

330 VAPOUR CONTROL LAYER

- Type: Reinforced polyethylene sheet.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Thickness: As drawing .
- Vapour resistance: As drawing .

331 EXPANDED POLYSTYRENE (EPS) WARM DECK ROOF INSULATION

- Standard: To BS EN 13163.
- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Grade: As recommended by insulation manufacturer for the traffic loading.
- Recycled content: Submit proposals.
- Thickness: 150 mm.
- Facing: Factory bonded foil upper face.

335 WARM DECK ROOF INSULATION

- Type: Phenolic foam to BS EN 13166.
- Manufacturer: Celotex.
  - Product reference: TD4000 Insulation.
- Density: As recommended by insulation manufacturer for the traffic loading.
- Thickness: 106 mm.

355 PERIMETER TRIMS

- Type: GRP.
- Manufacturer: Submit proposals.
  - Product reference: Contractor's choice.
- Colour: Black.
- Size: As drawing .
- Lengths (maximum): 3 m.

357 PIPE COLLARS

- Manufacturer: Contractor's choice.
  - Product reference: Submit proposals.
- Size: As drawing .

380 UV RESISTANT SEALER
- Manufacturer: Contractor's choice.
  - Product reference: Submit proposals.

EXECUTION GENERALLY

410 ADVERSE WEATHER
- Do not apply coatings:
  - In wet conditions or at temperatures below 5°C, unless otherwise permitted by coating manufacturer.
  - In high winds (speeds > 7 m/s), unless adequate temporary windbreaks are erected adjacent to working area.
- Unfinished areas of roof: Keep dry.

420 SUITABILITY OF SUBSTRATE
- Substrates generally:
  - Secure, clean, dry, smooth, free from frost, contaminants, loose material, voids, protrusions and organic growths.
  - Compatible with coating system.
- Preliminary work: Complete, including:
  - Formation of upstands, kerbs, box gutters, sumps, grooves, chases and expansion joints.
  - Fixing of battens, fillets and anchoring plugs/ strips.
- Moisture content and stability: Must not impair integrity of roof.

EXISTING SUBSTRATES

510 REMOVING EXISTING COVERINGS
- Mechanical stripping: Not permitted.
- Exposed substrate: Do not damage.

515 EXISTING FLASHINGS
- General: Raise to facilitate cleaning of surfaces to receive coatings.
- Timing: Leave raised during coating application and lower only after full curing.
- Damaged lengths: Replace with new, specified in section: tba.

520 PRELIMINARY POWER WASH TO EXISTING COVERINGS
- Timing: Before renewing existing coverings, water jet clean all areas. Allow to dry.

525 RENEWING EXISTING SUBSTRATES/ COVERINGS
- Areas to be renewed: Submit proposals.
- Timing: Remove only sufficient substrates/ coverings as will be renewed and made weathertight on same day.

530 MAKING GOOD EXISTING LIQUID APPLIED WATERPROOF ROOF COATINGS
- General: Inspect for adherence and repair defective areas in accordance with proposed coating manufacturer's recommendations.

535 MAKING GOOD EXISTING REINFORCED BITUMEN MEMBRANE COVERING
- Blisters: Star cut, dry out and rebond.
- Cracked and defective areas: Cut back to substrate.
- Substrate: Dry out.
- Bitumen membrane: Patch level with existing surface with layers of matching bitumen membrane, lapped minimum 100 mm onto existing membrane.

540 MAKING GOOD EXISTING MASTIC ASPHALT COVERING
- Defective areas: Soften and carefully cut out.
  - Hammers, chisels, etc: Do not use to cut cold mastic asphalt.
  - Substrate: Dry out.
  - Separating membrane: Make good.
  - Mastic asphalt: Patch level with existing surface in two coats, the top coat lapped minimum 75 mm onto existing mastic asphalt and to half its depth.

545 MAKING GOOD EXISTING FIBRE CEMENT SHEET COVERING
- Loose and soft surfaces: Wet and remove. Allow to dry.
- Cracked and damaged sheets: Replace.
- Bolt heads: Tighten and crop where necessary.
  - Corrosion and oxidation: Abrade back to bright metal.
- Asbestos based materials: Making good or removal must be carried out by a contractor licensed by the Health and Safety Executive prior to commencement of other works in their location.

550 MAKING GOOD EXISTING METAL SHEET COVERING
- Loose coatings: Remove.
- Corrosion and oxidation: Abrade back to bright metal.
- Structurally unsound sheets: Replace.

555 MAKING GOOD EXISTING CEMENTITIOUS SLABS/ SCREEDS
- Loose surfaces, sharp edges and projections: Remove.
- Hollow surfaces, voids and cracks: Fill with cement based repair mortar.

560 EXISTING EDGE TRIMS
- Fasteners: Check security. Replace as necessary.
- Existing coverings: Cut out from edge trim recess sufficient to accommodate coatings.

565 EXISTING GUTTERS/ OUTLETS
- Dirt, debris and build up of previous coverings/ coatings: Remove to restore free flow of water.

570 EXISTING CRACKS/ GAPS
- General: Rake out, clean and make good with sealants or repair systems recommended by coating manufacturer.

575 FINAL POWER WASH TO EXISTING COVERINGS
- General: Water jet clean all areas. Allow to dry.

580 STERILIZATION TREATMENT TO EXISTING COVERINGS
- Preliminary work: Complete including making good and cleaning down.
- Biocidal solution: Apply to all areas previously subject to organic growth. Allow to dry.

NEW SUBSTRATES/ VAPOUR CONTROL LAYERS/ WARM DECK ROOF INSULATION

610 FIXING TIMBER TRIMS
- Fasteners: Sherardized steel screws.
- Fixing centres (maximum): As drawing .

630 LAYING VAPOUR CONTROL LAYER
- Membrane: Bonded to all crowns of the profiled sheet.
- Laps: Sealed using materials and method recommended by membrane manufacturer.
- Upstands, kerbs and other penetrations: Enclose edges of insulation. Lap with coatings to form a complete seal.

640 LAYING WARM DECK ROOF INSULATION
- Setting out:
  - Long edges: Fully supported and run at right angles to existing boards.
    Joints: Butted together.
  - Ends: Adequately supported.
    Joints: Staggered.
- Bedding: Full bed of bonding compound.
- Mechanical fixing: Determined by contractor.
- Completion: Boards must be in good condition, well fitting and stable.

650 LAYING OVERLAY TO WARM DECK ROOF INSULATION
- Setting out:
  - Joints: Butted together.
  - End joints: Staggered to break joint with insulation.
- Bedding: Not required.
- Mechanical fixing: Not required.

660 FIXING PERIMETER TRIMS
- Setting out: 3 mm clear from wall or fascia.
- Fasteners: As drawing.
  - Fixing: 30 mm from ends and at 300 mm (maximum) centres.
- Jointing:
  - Sleeves: Fixed one side only.
  - GRP trims: Butt ends.
  - Aluminium trims: 3 mm gaps between ends.
- Corner pieces: Purpose made.

ROOF COATING SYSTEM

710 ADHESION TESTS
- Requirement: Carry out a trial coating to determine priming requirements and/ or system suitability.
- Nature of test: As drawing .
- Test results: Submit and arrange for inspection.

720 APPLYING PRIMERS/ CONDITIONERS
- Coverage per coat (minimum): 0.1 L/m².
- Surface coverage: Brushed well in to ensure local or full area coverage according to type.
- Coats: Allow to dry before overcoating.

730 LAYING CARRIER MEMBRANE
- Bond: Not required.
- Mechanical fixing: Not required.

740 MOVEMENT JOINTS IN SUBSTRATE
- Debonding tape: Apply over movement joints.
- Reinforcement strip: Apply over debonding tape.
  - Bedding: Preliminary coating application.
  - Joints: Lap in length.
  - Bond: Continuous over whole surface, with no air pockets.
  - Condition at completion: Smooth.

750 PRELIMINARY LOCAL REINFORCEMENT
- Reinforcement strip: Apply to junctions at upstands, penetrations and outlets, joints and fixings in discontinuous unit substrates.
  - Bedding: Preliminary coating application.
  - Joints: Lap in length.
  - Bond: Continuous over whole surface, with no air pockets.
  - Condition at completion: Smooth.

760 APPLICATION OF ROOF COATINGS
- Thickness: Monitor by taking wet/ dry film thickness readings.
- Continuity: Maintain full thickness of coatings around angles, junctions and features.
- Rainwater outlets: Form with watertight joints.
- Drainage systems: Do not allow liquid coatings to enter piped rainwater or foul systems.
- Edge trims: Apply coatings over horizontal leg of trim and into recess.

770 SKIRTINGS AND UPSTANDS
- Top edges of coatings: Where not protected by flashings, apply into chases cut to a minimum depth of 10 mm.
- Completion of chases: When coatings are fully cured, prepare chase and apply sealant as section Z22.
  - Sealant: To BS EN ISO 11600.
    Colour: As coating.

SURFACING

810 BLINDING
- Applying dusting powder: To coating surfaces at end of curing period to neutralize tackiness.

830 INSTALLING INVERTED ROOF INSULATION
- Condition of substrate: Clean.
- Separating layer: Lay polyethylene sheet under insulation where required by coating manufacturer.
- Setting out: Loose lay with staggered joints. Minimize cutting and avoid small pieces at perimeters and penetrations.
  - Joints: Butt together.
- Projections, upstands, rainwater outlets, etc: Cut insulation cleanly and fit closely around.
- Completion:
  - Boards in good condition, well fitting and stable.
  - Cover to prevent wind uplift and flotation as soon as practicable.

COMPLETION

910 INSPECTION
- Coating surfaces: Check when cured for discontinuities.
  - Defective areas: Apply another coating.

940 COMPLETION

- Roof areas: Clean.
  - Outlets: Clear.
  - Flashings: Dressed into place.
- Work necessary to provide a weathertight finish: Complete.
- Storage of materials on finished surface: Not permitted.
- Completed coatings: Protect against damage.

J41 Reinforced bitumen membrane roof coverings

To be read with Preliminaries/General conditions.

TYPES OF ROOF COVERING

110 BUILT-UP REINFORCED BITUMEN MEMBRANE WARM DECK ROOF COVERING TO REAR ADDITIONS

- Substrate: As per Structural Engineer's drawings.
  - Preparation: Remove existing waterproof covering.
- Vapour control layer: Determined by contractor.
- Insulation: Expanded polystyrene board.
- Overlay to insulation: Not required.
- Waterproof covering:
  - System manufacturer: 3 Layer reinforced bitumen membrane roof covering.
  - First layer: Agrément certified SBS modified bitumen membrane, polyester reinforced.
    Attachment: Torch-on bonding.
  - Intermediate layer: Agrément certified SBS modified bitumen membrane, polyester reinforced.
    Attachment: Torch-on bonding.
  - Top layer/ Capsheet: Agrément certified SBS modified bitumen membrane, polyester reinforced.
    Colour: Grey.
    Attachment: Torch-on bonding.
  - Flashings and detail work: Additional layer of SBS modified bitumen membrane, mineral surfaced.
- Surface protection: Determined by contractor.
- Accessories: Pipe collars.

130 BUILT-UP REINFORCED BITUMEN MEMBRANE COLD DECK ROOF COVERING TO BAY WINDOWS

- Substrate: Plywood deck.
  - Preparation: Remove existing waterproof covering.
- Waterproof covering:
  - System manufacturer: 3 Layer reinforced bitumen membrane roof covering.
  - First layer: Agrément certified SBS modified bitumen membrane, polyester reinforced.
    Attachment: Partial bonding.
  - Intermediate layer: Agrément certified SBS modified bitumen membrane, polyester reinforced.
    Attachment: Torch-on bonding.
  - Top layer/ Capsheet: Agrément certified SBS modified bitumen membrane, polyester reinforced.
    Colour: Green.
    Attachment: Torch-on bonding.
  - Flashings and detail work: Additional layer of SBS modified bitumen membrane, mineral surfaced.
- Surface protection: Not required.
- Accessories: Roof ventilators.

PERFORMANCE

205 COMPLETION OF DESIGN OF ROOF COVERINGS
- Description: As Preliminaries section A13.
- Requirement: Complete the detailed design to satisfy specified performance criteria and coordinate with the detailed design of related and adjacent work.
- Structural requirements: As section B50.
- Additional requirements: None.
- Design and production information: As Preliminaries section A31.
- Timing of submissions: As Preliminaries section A31.

207 ROOF COVERING DESIGN PROVIDED
- Description: As Preliminaries section A31.
- Requirements:
  - Generally: As section B50.
  - Additional requirements: None.

210 ROOF PERFORMANCE
- General: Secure, free draining and weathertight.

220 AVOIDANCE OF INTERSTITIAL CONDENSATION: WARM AND INVERTED ROOFS
- Interstitial condensation within roof construction: Determine risk as recommended in BS 6229.
- Basic design data:
  - Outdoor notional psychrometric conditions, winter:
    Temperature: - 5°C.
    Relative humidity: 90%.
    Vapour pressure: 0.36 kPa.
    Duration: 60 days.
  - Outdoor notional psychrometric conditions, summer:
    Temperature: 18°C.
    Relative humidity: 65%.
    Vapour pressure: 1.34 kPa.
    Duration: 60 days.
  - Indoor notional psychrometric conditions:
    Temperature: 30°C.
    Relative humidity: 60%.
    Vapour pressure: 2.54 kPa.
  - Winter interstitial condensate (warm roof):
    Calculated amount (maximum): 0.35 kg/m².
    Calculated annual net retention: Nil.
- Vapour control layer: If necessary, provide a suitable membrane so that damage and nuisance from interstitial condensation do not occur.

225 AVOIDANCE OF INTERSTITIAL CONDENSATION: WARM AND INVERTED ROOFS - BS 5250 AND BS EN ISO 13788
- Interstitial condensation within roof construction: Determine risk as recommended in BS 5250 and BS EN ISO 13788.
- Vapour control layer: If necessary, provide a suitable membrane so that damage and nuisance from interstitial condensation do not occur.

230 INSULATION
- Requirement: Determine type and thickness of insulation and integral or separate overlay to satisfy the following criteria:
  - Thermal transmittance of roof (maximum): 0.25 W/m²K.
  - Compressive strength of insulation (minimum) at 10% compression: 350 kPa.
  - Finished surface: Suitably even, stable and robust to receive roof covering.
  - Insulation compliance: To relevant British Standard, or Agrément certified.

PRODUCTS

320 PRIMER
- Type: Bitumen cut back with volatile solvent.
- Characteristics when tested to BS EN 12846-2:
  - Viscosity (maximum) (STV at 25°C, 4 mm orifice): 10s.

322 PRIMER
- Type: Contractor's choice.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.

325 BONDING COMPOUND
- Type: Oxidized bitumen.
- Restriction: For heat sensitive insulation materials, use cold bonding compounds.

327 BONDING COMPOUND
- Type: As recommended by bitumen membrane manufacturer .
- Manufacturer: Contractor's choice .
  - Product reference: Contractor's choice .
- Restriction: For heat sensitive insulation materials, use cold bonding compound.

330 TIMBER TRIMS, ETC
- Quality: Planed. Free from wane, pitch pockets, decay and insect attack (except ambrosia beetle damage).
- Moisture content at time of covering (maximum): 22%.
- Preservative treatment: As recommended by bitumen membrane manufacturer.

335 ANGLE FILLETS
- Material: Treated timber.
  - Size (minimum): 65MM X65MM.
- Restriction: Fillets under torch-on bitumen membranes to be non-combustible.

355 NAILS FOR FIXING REINFORCED BITUMEN MEMBRANES
- Type: Copper, extra large head clout, to BS 1202-2.

360 PLYWOOD OVERLAY TO METAL DECK
- Standard: To BS EN 636, section 9 (plywood for use in exterior conditions).
  - Quality: Naturally durable timber, free from preservatives.
- Thickness: 18 mm.

370 COVER STRIPS TO JOINTS IN RIGID BOARD SUBSTRATES
- Bitumen membrane: To BS 8747, class S2P3.
- Width: 150 mm.

EXECUTION GENERALLY

515 ADVERSE WEATHER
- General: Do not lay coverings in high winds, wet or damp conditions or in extremes of temperature unless effective temporary cover is provided over working area.
- Unfinished areas of roof: Keep dry. Protect edges of laid membrane from wind action.

520 INCOMPLETE WORK
- End of working day: Provide temporary seal to prevent water infiltration.
- On resumption of work: Cut away tail of membrane from completed area and remove from roof.

530 APPLYING PRIMERS
- Coverage per coat (minimum): 0.2 L/m².
- Surface coverage: Even and full.
- Coats: Fully bond. Allow volatiles to dry off thoroughly between coats.

540 APPLYING BONDING COMPOUNDS
- Roof sited boilers: Permitted.
- Temperature of compound: Suitable to achieve bond over whole surface. Do not overheat.
- Heat sensitive insulation materials: Use cold bituminous adhesive or overlays recommended by the insulation manufacturer.
- Application: Materials and method as bitumen membrane manufacturer's recommendations.

SUBSTRATES/ VAPOUR CONTROL LAYERS/ WARM DECK ROOF INSULATION

610 SUITABILITY OF SUBSTRATES
- Substrates generally: Secure, clean, dry, smooth, and free from frost, contaminants, voids and protrusions.
- Preliminary work: Complete including:
  - Grading to correct falls.
  - Formation of upstands, kerbs, box gutters, sumps, grooves, chases and expansion joints.
  - Fixing of battens, fillets and anchoring plugs/ strips.
- Moisture content and stability of substrate: Must not impair roof integrity.

620 RENEWING EXISTING COVERINGS
- Areas to be renewed: Submit proposals.
- Substrate: Do not damage.
- Timing: Remove only sufficient coverings as will be renewed and made weathertight on same day.

625 REMOVING EXISTING COVERINGS
- Mechanical stripping: Not permitted.
- Exposed substrate: Do not damage.

630 MAKING GOOD EXISTING REINFORCED BITUMEN MEMBRANE ROOF COVERING

- Existing items to be removed: As schedule.
- Dust, dirt, debris, moss, plants and grease: Remove.
- New materials and accessories: Compatible with existing.
- Blisters: Star cut, dry out and rebond.
- Defective areas of bitumen membrane: Cut back to substrate and dry out. Patch level with existing covering with layers of matching bitumen membrane, lapped minimum 100 mm onto existing membrane.
- Cracked and split bitumen membrane: Cut back to substrate 150 mm wide at cracks and splits and dry out. Insert 150 mm wide strip of matching bitumen membrane, bonded to substrate at edges only. Fully bond a layer of bitumen membrane over strip, lapped minimum 100 mm onto existing bitumen membrane at edges.
- Stress failure at edge trims: Cut back bitumen membrane to substrate. Secure ends of edge trims. Patch level with existing surface with layers of matching bitumen membrane.
- Detached bitumen membrane at upstands: Repair, re-adhere and protect with additional layer of matching bitumen membrane if necessary.
- Defects at penetrations: Cut out, clean, prime and reseal.

640 FIXING TIMBER TRIMS

- Fasteners: Sherardized steel screws.
- Fixing centres (maximum): As drawing .

660 JOINTS IN RIGID BOARD SUBSTRATES

- Cover strip: Lay centrally over substrate joints before laying vapour control layers or coverings. Adhere to substrate with bonding compound along edges only.

670 LAYING VAPOUR CONTROL LAYER

- Attachment: Securely bond or nail to substrate.
- Side and end laps: 75 mm minimum, fully bitumen sealed.
- Joints in second layer (where applicable): Stagger by half a membrane.
- Penetrations: Fully seal using bonding or taping methods recommended by manufacturer.
- Edges of insulation at roof edges, abutments, upstands, kerbs, penetrations and the like: Enclosed with vapour control layer:
  - Dressed up sufficiently, providing 50 mm (minimum) seal when overlapped by the roof covering; or
  - Turned back 150 mm (minimum) over the insulation and sealed down.

680 LAYING WARM DECK ROOF INSULATION

- Setting out:
  - Long edges: Fully support and run at right angles to structure.
  - End edges: Adequately support.
  - Joints: Butt together.
  - End joints: Stagger.
- Bedding: Full bed of bonding compound.
- Mechanical fixing: Determined by contractor.
- Protection to exposed edges of insulation: Reduced thickness treated timber batten, outer edge chamfered at changes in level.
- Completion: Boards must be in good condition, well fitting and stable.

690 LAYING OVERLAY TO WARM DECK ROOF INSULATION
- Setting out: Stagger to break joint with insulation.
  - Joints: Butt together.
- Bedding: Full bed of bonding compound.
- Mechanical fixing: Determined by contractor.

WATERPROOF MEMBRANES/ ACCESSORIES

710 LAYING REINFORCED BITUMEN MEMBRANES GENERALLY
- Direction of laying: Unrolled up the slope.
  - Where practicable, install so that water drains over and not into laps.
- Side and end laps: As recommended by bitumen membrane manufacturer.
- Head and side laps: Offset.
- Intermediate and top layer/ capsheet: Fully bond.
- Successive layers: Apply without delay. Do not trap moisture.
- Strips of bitumen membrane for 'linear' details: Cut from length of roll.
- Completed coverings: Firmly attached, fully sealed, smooth, weatherproof and free draining.

715 LAYING REINFORCED BITUMEN MEMBRANES ON ROOFS PITCHED MORE THAN 5°
- Timber battens: Fix flush with surface in substrates that will not securely accept nails.
  - Locations: To BS 8217, table 5.
  - Size: As drawing .
- Setting out: Parallel to roof slope, with successive layers carried over ridges.
  - Lengths (maximum): As recommended by bitumen membrane manufacturer.
  - End laps: Half stagger and align on alternate bitumen membranes.
- Additional fixing of bitumen membranes: As recommended by bitumen membrane manufacturer.

720 NAILING FIRST LAYER OF REINFORCED BITUMEN MEMBRANE TO TIMBER SUBSTRATE
- Setting out: Unroll, align and cut to length and work from one end. Minimize wrinkles.
- Fixing centres:
  - General area: Maximum 150 mm grid centres.
  - Perimeter of roof areas and at all side and head laps: 50 mm.

730 PARTIAL BONDING OF REINFORCED BITUMEN MEMBRANE
- Venting first layer: Loose lay, align and cut to length. Do not carry up angle fillets and vertical surfaces or through details.
  - Long edges: Overlap minimum 50 mm.
  - Ends: Butt together.
- Intermediate layer: Fully bond to first layer and through to substrate.

735 POUR AND ROLL BONDING OF REINFORCED BITUMEN MEMBRANES
- Bonding compound:
  - Hot and fluid when bitumen membranes are laid.
  - Application: Spread evenly so that a small quantity is squeezed out at each edge.
- Bond: Full over whole surface, with no air pockets.
- Excess compound at laps:
  - First and intermediate layers: Spread out.
  - Top layer/ Capsheet: Remove.

740 TORCH-ON BONDING OF REINFORCED BITUMEN MEMBRANE
- Bond: Full over whole surface, with no air pockets.
- Excess compound at laps of top layer/ capsheet: Leave as continuous bead.

745 COLD APPLIED ADHESIVE BONDING OF REINFORCED BITUMEN MEMBRANES
- Bond: Full over whole surface, with no air pockets.

747 SELF-ADHESIVE BONDING OF REINFORCED BITUMEN MEMBRANES
- Bond: Full over whole surface, with no air pockets

750 LAYING MINERAL FACED REINFORCED BITUMEN MEMBRANES
- Lap positions and detailing of ridges, eaves, verges, hips, abutments, etc: Submit proposals.
- Setting out: Neat, with carefully formed junctions.
- Lap bonding: Carry out only at prefinished margins or prepared 'black to black' edges.
- Excess bonding compound at laps: Remove whilst still warm.

755 LAYING METAL FACED REINFORCED BITUMEN MEMBRANES
- Lap positions and detailing of ridges, eaves, verges, hips, abutments, etc: Submit proposals.
- Setting out: Neat with carefully formed junctions.
- Excess bonding compound at laps: Remove whilst still warm.
- Metal face: Do not mark, crease or stain.

760 MECHANICAL FIXING OF SINGLE LAYER REINFORCED BITUMEN MEMBRANES
- Installing fasteners:
  - Use manufacturer's recommended methods and equipment.
  - Insertion: Correct and consistent.
- Washers/ Pressure plates/ Bars:
  - Distance from fixed edge (minimum): 10 mm.
  - Fixing: Flush with membrane.

765 WELDED JOINTING OF SINGLE LAYER REINFORCED BITUMEN MEMBRANES
- Side and end joints:
  - Preparation: Clean and dry surfaces for full width of joint.
  - Sealing: Hot air welded.

775 SKIRTINGS AND UPSTANDS
- Angle fillets: Fix by bitumen bonding or nailing.
- Venting first layer of bitumen membrane: Stop at angle fillet. Fully bond in bitumen for 300 mm strip around perimeters. Overlap onto upstand with strips of BS 8747, Class S1P1 bitumen membrane, fully bonded.
- Other layers of bitumen membrane: Carry in staggered formation up upstand, with each layer fully bonded. Where practicable, carry top layer over top of upstand.
- Upstands:
  - At ends of rolls: Form with bitumen membrane carried up without using separate strip.
  - Elsewhere: Form with matching strips of bitumen membrane, maintaining laps.
  - Additional fixing of bitumen membranes: As recommended by bitumen membrane manufacturer.

780 WELTED DRIPS
- Material: To BS 8747 Class S5P5, mineral surfaced.
  - Length: Form using maximum length strips.
  - Height at external gutter (minimum): 75 mm.
- Welt tail: Nail to face of drip batten. Fold neatly.
- Welt: Bond together, carry minimum 100 mm onto roof. Overlap with top bitumen membrane.

SURFACING

810 LAYING INVERTED ROOF INSULATION
- Condition of substrate: Clean.
- Setting out: Loose lay with staggered joints.
  - Cutting: Minimize.
  - Small cut pieces: Avoid at perimeters and penetrations.
  - Joints: Butt together.
- Projections, upstands, rainwater outlets, etc: Cut insulation cleanly and fit closely around.
- Completion:
  - Boards must be in good condition, well fitting and stable.
  - Cover as soon as practicable to prevent wind uplift and flotation.

820 LAYING STONE BALLAST
- Condition of substrate: Clean.
- Gravel guards: Fit to outlets.
- Previously laid materials: Protect during laying of ballast.
- Laying: Spread evenly. Do not pile to excessive heights.
  - Depth (minimum): 100 mm.

870 APPLYING CHIPPINGS
- Condition of substrate: Clean.
- Gravel guards: Fit to outlets.
- Dressing compound: Hot or cold application. Evenly pour at 1.5 kg/m².
- Chippings application (approximately): 16 kg/m².
- Completion: Remove loose excess chippings without exposing dressing compound.

COMPLETION

910 INSPECTION
- Interim and final roof inspections: Submit reports.

920 ELECTRONIC ROOF INTEGRITY TEST
- Testing authority: The roofing contractor.
- Timing of test: Give notice.
- Condition of roof prior to testing:
  - Complete to a stage where integrity can be tested.
  - Surface: Clean.
- Test results and warranty: Submit on completion of testing.

930 FLOOD TEST
- Condition of roof before testing: Complete to a stage where integrity of bitumen membrane covering can be tested.
- Outlets: Externally cover and seal. Protect against damage from water pressure using temporary kerbs. Do not use plugs to seal outlets.
- Flood levels: Submit proposals. In no case higher than kerbs.
- Flood duration: 24 hours.
- Inspection to detect leaks: Regular.
- Completion of test: Slowly drain roof. Do not overload or flood outlets.
- Test results and warranty: Submit on completion of testing.

940 COMPLETION

- Roof areas: Clean.
- Outlets: Clear.
- Work necessary to provide a weathertight finish: Complete.
- Storage of materials on finished surface: Not permitted.
- Completed membrane: Do not damage. Protect from chemicals, traffic and adjacent or high level working.

K
Linings/Sheathing/Dry partitioning

K10 Plasterboard dry linings/ partitions/ ceilings

To be read with Preliminaries/ General conditions.

TYPES OF DRY LINING

116 TIMBER STUD PARTITION SYSTEM AREAS WITH TIMBER JOIST CEILING CONSTRUCTION

- Partition type: Double row studs .
- Partition height: Maximum 3300mm.
- Head condition: Timber joists.
  - Deflection allowance: 10 mm maximum.
- Structural performance:
  - Strength grade to BS 5234-2: Medium.
    Additional tests: Not required.
  - Air pressure and deflection: Not applicable.
  - Other requirements: Allow for weight of ceramic tiles, as section M40.
- Fire resistance of complete partition assembly: To BS 476-20 and -22, 60/60 minutes (Integrity/ Insulation).
- Airborne sound insulation
  - Laboratory measurement of complete partition assembly:
  - Weighted sound reduction index Rw (minimum) to BS EN ISO 717-1: Not less than 50 Rw dB.
- Metal framing: Type recommended by board manufacturer to complete the partition assembly and achieve specified performance.
- Insulation: Rock mineral wool to BS EN 13162; density not less than 46 kg/m³.
  - Recycled content: Not applicable.
  - Thickness: 100 mm.
- Resilient layer: Rubber Tape.
- Linings: Two layers 15 mm BG Soundbloc plasterboard .
- Finishing: Skim coat plaster .
  - Primer/ Sealer: Not required.
  - Accessories: Beads/ stops as recommended by board manufacturer.
- Other requirements: Fire stopping around services as section P12.

126 TIMBER STUD PARTITION SYSTEM AREAS WITH SUSPENDED CEILING CONSTRUCTION (COMPARTMENT CEILINGS)

- Manufacturer: Submit proposals.
  - Product reference: tbc.
- Studs:
  - Type: metal Channel top track bottom track.
  - Centres: 450 mm.
- Head condition: Suspended ceiling.
  - Deflection allowance: 10 mm.
- Insulation: Rock mineral wool to BS EN 13162. Density not less than 46kg/m³.
  - Recycled content: Not applicable.
  - Thickness: 100mm.
- Resilient layer: Rubber tape.
- Linings: Two layers 12.5 mm Soundbloc MR and Fireline plasterboard.
- Finishing: Skim coat plaster .
  - Primer/ Sealer: Not required.
  - Accessories: Metal beads/ stops recommended by board manufacturer .
- Other requirements: Fire stopping around services as section P12.

146 WALL LINING SYSTEM (TIMBER STUDS) EXTERNAL WALLS

- Cavity between wall and studs: 60 mm minimum.
- Wall lining height: MAX 3300 mm.
  - Intermediate bracing: Permitted at mid height.
- Head condition: Timber joists.
  - Deflection allowance: 10 mm maximum.
- Structural performance:
  - Strength grade to BS 5234-2: Medium.
    Additional tests: Acoustic Testing.
  - Air pressure and deflection: Air pressure (maximum) 200 N/m² and deflection (maximum) height ÷ .
  - Other requirements: Allow for weight of ceramic tiles, as section M40.
- Fire resistance of complete wall lining assembly: To BS 476-20 and -22, 60/60 minutes (Integrity/ Insulation).
- Thermal resistance (R) of complete wall lining assembly (excluding surface resistances): Not less than 2.8 m²K/W..
- Metal framing: Type recommended by board manufacturer to complete the partition system and achieve specified performance.
- Insulation: Mineral wool to BS EN 13162; density not less than 46 kg/m³. .
  - Recycled content: Not applicable.
  - Thickness: 100mm.
- Moisture vapour resistance (minimum): 150 MNs/g..
- Resilient layer: Rubber tape.
- Linings: 67.5mm Kingsspan insulation board complete with 12.5mm plasterboard finish.
- Access units: required service panels.
- Finishing: Skim coat plaster.
  - Primer/ Sealer: Type recommended by board manufacturer to provide vapour control..
  - Accessories: Metal trims recommended by the board manufacturer: edge reveals; corner reveals and door reveals..
- Other requirements: Fire stopping around services as section P12..

205 LINING ON TIMBER TO ALL STUD PARTITIONS

- Background: Battens at 400 mm centres.
- Metal resilient (acoustic) bars: At 600 mm centres.
- Linings: Two layers 12.5 mm mr,sound and fireline plasterboard.
  - Fixing: Screws.
- Finishing: Skim coat plaster.
  - Primer/ Sealer: Primer to painted areas.
  - Accessories: Metal beads/ stops recommended by board manufacturer .
- Other requirements: Fire stopping around service penetrations as section P12.

215 SUSPENDED CEILING SYSTEM TO COMPARTMENT CEILINGS

- Lining board: Two layers 15 mm SoundBloc plasterboard or equivalent/approved.
  - Finishing: Skim coat plaster.
    Primer/ Sealer: Not required.
  - Accessories: Metal beads/ stops recommended by lining board manufacturer.
- Suspension system: As recommended by lining manufacturer to complete the ceiling system and achieve specified performance.
  - Grid type: With primary channels.
  - Hangers: Type recommended by board manufacturer Reilant bars.
    Length: To give ceiling soffit height above finished floor level of 2400 mm.
  - Top fixing: To suit structural soffit of timber joists at 600 mm nominal centres.
- Insulation: Glass mineral wool to BS EN 13162; density (minimum) 46 kg/m³.
  - Recycled content: Not applicable.
  - Thickness: 100 mm.
- Access units: Required.
- Integrated services fittings: None.
- Other requirements: Fire stopping around service penetrations as section P12.
- System performance:
  - Structural: The ceiling system must safely support all anticipated loads including services fittings.
    Test standard: To BS EN 13964.
    Uniformly distributed load (maximum): 0.6 kN/m².
    Additional loads/ pressures: Luminaires as drawings and schedules.
    Deflection of grid between points of support (maximum): 0.0025 x span.
  - Fire resistance: To BS 476-22, 60 minutes integrity and Insulation.
  - Airborne sound insulation (complete floor and ceiling assembly):
    Weighted sound reduction index, Rw (minimum), to BS EN ISO 717-1: Not applicable.
    Other requirements: Weighted standardized level difference, DnT,W (minimum) to BS EN ISO 717-1 when combined with partition type K10/50 dB.

220 PROPRIETARY SUSPENDED CEILING SYSTEM

- Manufacturer: British Gypsum.
  - Product reference: MF System.
- Lining board: Two layers 15 mm Fire line/sound bloc plasterboard or equivalent/approved.
  - Finishing: Skim coat plaster.
  - Accessories: Metal beads/ stops recommended by lining board manufacturer.
- Suspension system:
  - Grid centres: 600 mm.
  - Hangers: Type recommended by board manufacturer resilant bars.
    Length: To give ceiling soffit height above finished floor level of min 2400 mm.
    Centres: 1200 mm.
    Top fixing: To suit structural soffit of timber joists at 400 mm nominal centres.
- Insulation: Glass mineral wool to BS EN 13162; density (minimum) 46 kg/m³.
  - Thickness: 100 mm.
- Access units: Required.
- Integrated services fittings: None.
- Accessories/ Other requirements: None.

245 CEILING LINING ON TIMBER JOISTS
- Background: Joists at 450 mm centres.
- Metal resilient (acoustic) bars: Not required.
- Linings: 12.5 mm plasterboard.
  - Fixings: Screws.
- Finishing: Skim coat plaster.
  - Primer/ Sealer: Not required.
  - Accessories: Metal beads/ stops recommended by board manufacturer .
- Other requirements: Fire stopping around service penetrations as section P12.

275 ENCASEMENT ON TIMBER FRAMING To Steel Beams
- Timber framework: 44 x 44 mm with noggings at 600 mm maximum centres..
- Linings: Two layers 12.5 mm fire line plasterboard.
  - Fixing: Screws.
- Finishing: Skim coat plaster.
  - Primer/ Sealer: Not required.
  - Accessories: Metal beads/ stops recommended by board manufacturer .
- Other requirements: Plan dimensions of casings to be the same for all columns.

GENERAL/ PREPARATION

305 COMPLIANCE WITH PERFORMANCE REQUIREMENTS
- Testing/ Assessment: Submit UKAS accredited laboratory reports for the following: Fire resistance: Partitions (including deflection heads and doorsets) and suspended ceilings (including access units)..
- Materials, components and details: As used in testing/ assessment reports. If discrepancies arise, give notice.

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.

COMPONENTS

401 GYPSUM PLASTERBOARD
- Type: To BS EN 520, type A .
- Core density (minimum): 650 kg/m³.
- Recycled content: Contractors choice.
- Exposed surface and edge profiles: Suitable to receive specified finish.

403 GYPSUM PLASTERBOARD (MOISTURE RESISTANT)
- Type: To BS EN 520, type H1.
- Core: Moisture resistant.
  - Density (minimum): 710 kg/m³.
- Paper facings: Moisture resistant.
- Recycled content: Contractors choice.
- Exposed surface and edge profiles: Suitable to receive specified finish.

404 GYPSUM PLASTERBOARD (IMPROVED FIRE PROTECTION)
- Type: To BS EN 520, type F.
- Core: Including fibres and/ or other additives for improved cohesion.
  - Density (minimum): 800 kg/m³.
- Recycled content: Contractors choice.
- Exposed surface and edge profiles: Suitable to receive specified finish.

406 GYPSUM PLASTERBOARD (IMPROVED FIRE PROTECTION AND MOISTURE RESISTANT)
- Type: To BS EN 520, type H1 and F.
- Core: Moisture resistant and including fibres and/ or other additives for improved cohesion.
  - Density (minimum): 800 kg/m³.
- Paper facings: Moisture resistant.
- Recycled content: Contractors choice.
- Exposed surface and edge profiles: Suitable to receive specified finish.

407 GYPSUM PLASTERBOARD (IMPROVED FIRE PROTECTION AND VAPOUR CONTROL)
- Type: To BS EN 520, type F.
- Core density (minimum): 800 kg/m³.
- Recycled content: Contractors choice.
- Moisture vapour resistance of backing layer (minimum): 60 MNs/g.
- Exposed surface and edge profiles: Suitable to receive specified finish.

409 GYPSUM PLASTERBOARD (IMPROVED SOUND INSULATION)
- Type: To BS EN 520, type D.
- Core density (minimum): 820 kg/m³.
- Recycled content: Contractors choice.
- Exposed surface and edge profiles: Suitable to receive specified finish.

410 GYPSUM PLASTERBOARD (IMPROVED SOUND INSULATION AND MOISTURE RESISTANT)
- Type: To BS EN 520, type H1.
- Core: Moisture resistant.
  - Density (minimum): 820 kg/m³.
- Paper facings: Moisture resistant.
- Recycled content: Contractors choice.
- Exposed surface and edge profiles: Suitable to receive specified finish.

430 ACCESS PANELS General
- Type: 60 minutes fire protection, to BS 476-22 .
  - Sizes: 300 x 300 mm .
- Frame: Bead for taping and jointing .
- Panel: Plasterboard infill .
- Lock: Tamper proof and operated by castellated key .

432 METAL STUDS
- Manufacturer: Gyproc .
  - Product reference: TBA .

INSTALLATION

435 DRY LININGS GENERALLY
- General: Use fixing, jointing, sealing and finishing materials, components and installation methods recommended by board manufacturer.
- Cutting plasterboards: Neatly and accurately without damaging core or tearing paper facing.
  - Cut edges: Minimize and position at internal angles wherever possible. Mask with bound edges of adjacent boards at external corners.
- Fixings boards: Securely and firmly to suitably prepared and accurately levelled backgrounds.
- Finishing: Neatly to give flush, smooth, flat surfaces free from bowing and abrupt changes of level.

445 CEILINGS
- Sequence: Fix boards to ceilings before installing dry lined walls and partitions.
- Orientation of boards: Fix with bound edges at right angles to supports and with ends staggered in adjacent rows.
- Two layer boarding: Stagger joints between layers.

456 TIMBER FRAMING FOR PARTITIONS/ WALL LININGS
- Setting out: Accurately aligned and plumb.
  - Frame/ Stud positions: Equal centres to suit specified linings, maintaining sequence across openings.
  - Additional studs: To support vertical edges of boards.
- Fixing centres at perimeters (maximum): 600 mm.
- Openings: Form accurately.
  - Doorsets: Use sleeved or boxed metal studs and/ or suitable timber framing to achieve strength grade requirements for framing assembly and adequately support weight of door.
  - Services penetrations: Allow for associated fire stopping.

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

476 TIMBER FURRINGS FOR WALL LININGS

- Setting out: Accurately aligned and plumb.
  - Vertical furring positions: Equal vertical centres to suit specified linings, maintaining sequence across openings. Position adjacent to angles and openings.
  - Additional vertical furrings: To support vertical edges of boards and at junctions with partitions.
  - Horizontal furring positions: To provide continuous support to edges of boards.
- Adhesive bedding to furrings:
  - Dabs: Length 200 mm (minimum). Located at ends of furrings and thereafter at 450 mm (maximum) centres.
  - Junctions with partitions: Continuous bed with no gaps across cavity.

485 SUSPENDED CEILING GRIDS

- Setting out: Accurately aligned and level.
  - Grid members and hangers: Centres to suit specified linings and imposed loads.
  - Additional grid members: Provide bracing and stiffening at upstands, partition heads, access hatches, etc.
- Fixing: Securely at perimeters, grid joints, top and bottom hanger fixings.

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.
  - Pressurized shafts and ducts: At board-to-board and board-to-metal frame junctions.
- Application: To clean, dry and dust free surfaces as a continuous bead with no gaps.
  - Gaps greater than 6 mm between floor and underside of plasterboard: After sealing, fill with jointing compound.

530 CAVITY FIRE BARRIERS WITHIN PARTITIONS/ WALL LININGS

- Metal framed systems:
  - Material: Plasterboard 12.5 mm thick.
  - Installation: Form accurately and fix securely with no gaps to provide a complete barrier to smoke and flame.
- Adhesive fixed wall lining systems:
  - Material: Adhesive compound.
  - Installation: Form in a continuous line with no gaps to provide a complete barrier to smoke and flame.

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 plasterboards:
  - Bound edges: Lightly butted.
  - Cut/ unbound edges: 3 mm gap.
- Square edged plasterboards: 3 mm gap.
- Square edged fibre reinforced gypsum boards: 5 mm gap.

565 VERTICAL JOINTS
- Joints: Centre on studs.
  - Partitions: Stagger joints on opposite sides of studs.
  - Two layer boarding: Stagger joints between layers.

570 HORIZONTAL JOINTS
- Surfaces exposed to view: Horizontal joints not permitted. Seek instructions where height of partition/ lining exceeds maximum available length of board.
- Two layer boarding: Stagger joints between layers by at least 600 mm.
- Edges of boards: Support using additional framing.
  - Two layer boarding: Support edges of outer layer.

575 PLANK PLASTERBOARD
- First layer in two layer boarding: Square edged with long edges at right angles to studs.

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.

591 FIXING PLASTERBOARD TO TIMBER 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.

593 FIXING INSULATION BACKED PLASTERBOARD TO TIMBER FURRINGS
- Fixing to furrings: In addition to screw fixings apply continuous beads of adhesive sealant to furrings.

595 DEFLECTION HEADS
- Fixing boards: Do not fix to head channels.

610 FIXING PLASTERBOARD 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 PLASTERBOARD 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.

625 FIXING INSULATION BACKED PLASTERBOARD WITH ADHESIVE DABS

- Fixing to substrates: In addition to adhesive dab fixings, secure boards with nailable plugs in locations recommended by board manufacturer.

630 FIXING INSULATION BACKED PLASTERBOARD WITH ADHESIVE SPOTS

- Setting out boards: Accurately aligned and plumb.
- Fixing to substrates: Securely using adhesive spots and mechanical fastenings.
- Adhesive spot spacings to each board: Four vertical rows, at 400 mm centres in each row.
- Adhesive spot diameters (minimum): 25 mm.
- Mechanical fasteners: Nailable plugs in locations recommended by board manufacturer.

FINISHING

650 LEVEL OF DRY LINING ACROSS JOINTS

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

670 SEAMLESS JOINTING TO PLASTERBOARDS

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

680 SKIM COAT PLASTER FINISH

- Plaster type As recommended by board manufacturer..
  - 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.

692 RIGID BEADS/STOPS

- Internal: To BS EN 13658-1.
- External: To BS EN 13658-2.

695 INSTALLING BEADS/ STOPS

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

725 REPAIRS TO EXISTING PLASTERBOARD

- Filling small areas with broken cores: Cut away paper facing, remove loose core material and fill with jointing compound.
  - Finish: Flush, smooth surface suitable for redecoration.
- Large patch repairs: Cut out damaged area and form neat hole with rectangular sides. Replace with matching plasterboard.
  - Fixing: Use methods to suit type of dry lining, ensuring full support to all edges of existing and new plasterboard.
  - Finishing: Fill joints, tape and apply jointing compound to give a flush, smooth surface suitable for redecoration.

K21 Wood strip/ board fine flooring/ linings

To be read with Preliminaries/ General conditions.

TYPES OF FLOORING/ LINING

111 WOOD FLOATING FLOOR ACOUSTIC FLOORING TO MAISONETTE'S 1 AND 2 (FIRST FLOOR)

- Substrate: sub floor t&g glued and screwed.
  - Preparation: sound and rigid,.
- Resilient layer: Not required.
  - Recycled content: Contractor's choice.
- Vapour control layer: not required.
- Strips/ Boards: Free from decay, through splits and insect attack (including ambrosia beetle damage, unless permitted in the class/ grade specified). Planed all round.
  - Manufacturer/ Supplier: Cellecta DECKfon 26T Acoustic boarding.
  - Wood species: N/a.
  - Appearance class/ Grade: t&g Flooring.
  - Finished face width: 600 x2400.
  - Finished thickness: 26mm.
  - Edges: Side and end matched.
  - Moisture content at time of fixing: 6-9%.
  - Method of joining: Glue and screw.
- Finish: n/a.
- Accessories: Use this item to specify matching skirtings, threshold strips, access covers, etc..
- Other requirements: Layed before skirtings and architraves

GENERAL/ PREPARATION

210 WORKMANSHIP GENERALLY

- Moisture content of timber supports: 12-14%.
- Methods of fixing and fasteners: As section Z20 where not specified.
- Protection: Protect from dirt, stains and damage using suitable coverings and boards laid as the work proceeds.

220 ENVIRONMENTAL CONDITIONS

- General requirements prior to starting work specified in this section: Building weathertight, wet trades completed and affected areas dried out.
- Temperature and humidity before, during and after installing strips/ boards: Maintained at levels approximating to those which will prevail after building is occupied.

250 FIXTURES

- Fixtures around which strip flooring is to be fixed: Installed before starting work specified in this section.

260 DRYNESS OF CONCRETE/ SCREED SUBSTRATES FOR FLOORING

- 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.
- Drying aids: Turned off for not less than four days before testing.

280 EXISTING WOOD FLOORING

- Condition: Boards securely fixed and acceptably level. Protruding fasteners punched in or countersunk.

FIXING/ FINISHING

330 FIXING BATTENS

- General: Battens spaced evenly, packed or adjusted as necessary to give a true, level, finished surface, and fixed securely.

335 TREATED TIMBER

- Surfaces exposed by minor cutting and drilling: Treated with two flood coats of a solution recommended for the purpose by main treatment solution manufacturer.

340 ACCESS PANELS

- Size and position: Agree before strips/ boards are fixed.
- Additional noggings/ dwangs (Scot), battens, etc: Provide and fix as necessary.

360 EXPANSION PROVISION

- Expansion gaps:
  - Edges of flooring: Parallel to lie of strips/ boards and 10 mm wide.
  - Ends of flooring: 10 mm wide.
- Spacer blocks and debris: Removed before fixing skirtings/ cover fillets.
- Intermediate expansion/ movement joints: Formed as recommended by flooring manufacturer/ supplier.

370 FINISH TO FLOORING

- Exposed fastener heads: Punched or set below surface and filled with stopping to match wood.
- Strips/ Boards: Sanded to give a clean, smooth and flush surface free from score marks.
- Finish: tba .

380 FINISH TO LINING

- Exposed fastener heads: Punched or set below surface and filled with stopping to match wood.
- Strips/ Boards: Sanded to give a clean, smooth and flush surface free from score marks.
- Finish: tba .

L
Windows/Doors/Stairs

L10 Windows/ Rooflights/ Screens/ Louvres

To be read with Preliminaries/ General conditions.

GENERAL

110 EVIDENCE OF PERFORMANCE
- Certification: Provide independently certified evidence that all incorporated components comply with specified performance requirements.

115 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.

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

140 CONTROL SAMPLES
- Procedure:
  - Finalise 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 manufacturer of the remaining quantity.
- Designated items: uPVC windows.

155 VIEW OUT
- Windows/ opening sizes and position: Design to meet BREEAM 'View out' criteria for relevant building type.
- Submit design plan and elevation drawings showing the following:
  - All BREEAM defined 'relevant areas' dependent on building type and room depths.
  - Actual or notional workstation/ desk layouts.
  - Window/ open areas.
- Submit site plan showing: Building location and proximity to external obstructions.

160 POTENTIAL FOR NATURAL VENTILATION

- Submit design plan and elevation drawings, and calculations confirming the following:
  - A copy of the results from a software modelling tool recommended in CIBSE AM10 ;
  - Room depths;
  - Gross internal floor area of each occupied space;
  - Locations of openings;
  - Types of windows/ ventilators and total openable areas; and
  - Types and degree of user-controls.

PRODUCTS

205 WINDOW MATERIALS SPECIFICATION

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

206 BUILDING CONTROL

- All windows are to comply with secuirty requirements: PAS 24:2012.

350 PVC-U WINDOWS

- Manufacturer: Nationcare Windows or equivalent/approved.
  - Product reference: Submit proposals.
  - Colour/ Texture: White.
- Glazing details: Insulating glass units incorporating low emissivity glass (en = 0.05), argon filled .
  - Beading: External.
- Ironmongery/ Accessories:
  - Casement stay;
  - Handle;
  - Horizontal friction pivot;
  - Restrictor; and
  - Trickle ventilator.
- Fixing: Through frame fixing as clause 783.

440 PVC-U SUBFRAMES

- Manufacturer: Nationcare windows or equivalent/approved.
  - Product reference: Submit proposals.
- Fixing: Use lugs and ties supplied by subframe manufacturer.

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: Stack vertical or near vertical on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.

730 PRIMING/ SEALING

- Wood surfaces inaccessible after installation: Prime or seal as specified before fixing components.

750 BUILDING IN

- General: Not permitted unless indicated on drawings.
  - Brace and protect components to prevent distortion and damage during construction of adjacent structure.

755 PVC-U WINDOW INSTALLATION
- Standard: In accordance with clause 783 and British Plastics Federation 'Code of practice for the survey and installation of windows and external doorsets'.

760 REPLACEMENT WINDOW INSTALLATION
- Standard: To BS 8213-4.

766 LOCATION OF OPENABLE WINDOWS IN NATURALLY VENTILATED BUILDINGS
- Location: Over 10 m from sources of external pollution.

770 DAMP PROOF COURSES IN PREPARED OPENINGS
- Location: Ensure correct positioning in relation to window frames. Do not displace during fixing operations.

780 FIXING OF WOOD FRAMES
- Standard: As section Z20.
- Fasteners: Stainless steel wood screws .
  - Spacing: When not predrilled or specified otherwise, position fasteners not more than 150 mm from ends of each jamb, adjacent to each hanging point of opening lights, and at maximum 450 mm centres.

781 FIXING OF STEEL FRAMES
- Standard: As section Z20.
- Fasteners: Stainless steel wood screws.
  - Spacing: When not predrilled or specified otherwise, position fasteners not less than 50 mm and not more than 190 mm from ends of each jamb, adjacent to each hanging point of opening lights and at maximum 900 mm centres.

782 FIXING OF ALUMINIUM FRAMES
- Standard: As section Z20.
- Fasteners: Stainless steel wood screws.
  - Spacing: When not predrilled or specified otherwise, position fasteners not more than 250 mm from ends of each jamb, adjacent to each hanging point of opening lights, and at maximum 600 mm centres.

783 FIXING OF PVC-U FRAMES
- Standard: As section Z20.
- Fasteners: Stainless steel wood screws.
  - Spacing: When not predrilled or specified otherwise, position fasteners 150-250 mm from ends of each jamb, adjacent to each hanging point of opening lights, but no closer than 150 mm to a transom or mullion centre line, and at maximum 600 mm centres.

784 FIXING OF COMPOSITE FRAMES
- Standard: As section Z20.
- Fasteners: Stainless steel wood screws.
  - Spacing: When not predrilled or specified otherwise, position fasteners not more than 150 mm from ends of each jamb, adjacent to each hanging point of opening lights, and at maximum 600 mm centres.

790 FIRE RESISTING FRAMES
- Gap between back of frame and reveal: Completely fill with intumescent mastic or tape.

800 BACKFILLING OF STEEL FRAME SECTIONS

- Windows fixed direct into openings: After fixing, fill back of steel frame with waterproof cement fillet.

810 SEALANT JOINTS

- Sealant:
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Colour: tbc.
  - Application: As section Z22 to prepared joints. Finish triangular fillets to a flat or slightly convex profile.

820 IRONMONGERY

- Fixing: Assemble and fix carefully and accurately using fasteners with matching finish supplied by ironmongery manufacturer. Do not damage ironmongery and adjacent surfaces.
- Checking/ Adjusting/ Lubricating: Carry out at Completion and ensure correct functioning.

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): 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: Not applicable.
  - Other evidence: None.

115 FIRE RESISTING DOORS/ DOORSETS/ ASSEMBLIES
- Evidence of fire performance: Provide certified evidence, in the form of a product conformity certificate, directly relevant fire test report or engineering assessment, that each door/ doorset/ assembly supplied will comply with the specified requirements for fire resistance if tested to BS 476-22, BS EN 1634-1 or BS EN 1634-3. Such certification must cover door and frame materials, glass and glazing materials and their installation, essential and ancillary ironmongery, hinges and seals.

120 NON FIRE RESISTING DOORS/ DOORSETS/ ASSEMBLIES
- 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.

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

151 BUILDING CONTROL
- All doors are to comply with secuirty requirements: PAS 24:2012.

PRODUCTS

230 WOOD FLUSH DOORS FD30S FIRE RESISTING AND SMOKE CONTROL
- Manufacturer: Submit proposals.
  - Product reference: tba.
- Facings: Interior grade plywood.
- Lippings: Concealed lippings to long edges.
- Preservative treatment: Not required.
- Finish as delivered: tba.
- Glazing/ Infill details: tba.
  - Manifestation: Not applicable.
  - Beading: Not required.
- Other requirements: None.

280 DOORS COMPOSITE MAIN FRONT EXTERNAL DOORS
- Manufacturer: Premdoor or equivalent/approved.
  - Product reference: Product code 44906 or equivalent/approved.
- Finish as delivered: Polyester powder coated to BS 6496, colour black.
- Glazing/ Infill details: Obscure fire-resisting glazing.
  - Manifestation: Not applicable.
  - Beading: Not required.
- Ironmongery: As ironmongery schedule.
- Other requirements: White.

310 WOOD DOOR FRAMES AND ARCHITRAVES
- Manufacturer: Howdens or equivalent/approved.
  - Product reference: Submit proposals.
- Species: Softwood.
- Preservative treatment: Required.
- Finish as delivered: tbc.
- Perimeter seals: Not required.
- Fixing: Plugged and screwed as section Z20.

630 HATCHES TO MAIN ROOF
- Manufacturer: Access Panel Company Ltd, or equivalent/approved
  www.accesspanels.co.uk
  sales@accesspanels.co.uk
  01724853090 .
  - Product reference: Roof Hatch .
- Access Roof hatch to gain access to valley roof .

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.

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
- Sealant:
  - Manufacturer: Contractor's choice .
    Product reference: Contractor's choice .
  - Colour: tba .
  - 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.

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 $\geq$ 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.
- Third hinge: Where specified, positioned with centre line 250 mm below centre line of top hinge .
- Hinges for fire resisting doors: Positioned in accordance with door leaf manufacturer's recommendations.

860 INSTALLATION OF EMERGENCY EXIT DEVICES

- Standard: Unless specified otherwise, install panic bolts/ latches in accordance with BS EN 1125.

L30 Stairs/ ladders/ walkways/ handrails/ balustrades

To be read with Preliminaries/ General conditions.

PRELIMINARY INFORMATION/ REQUIREMENTS

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: Contractor's choice, submit proposals.
  - Other evidence: None.

130 SITE DIMENSIONS
- Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
  - Designated items: FFl heights for acurrate tread depths and risers.

COMPONENTS

210 WOOD STAIRS
- Manufacturer: for approval prior to Building Control approval.
  - Product reference: for approval prior to Building Control approval.
- Components:
  - Treads: 21 mm MDF.
  - Risers: 9 mm moisture resistant plywood.
  - Strings: 32 mm redwood + string capping.
  - Newels: 92 x 92 softwood - square.
  - Guarding: Hemlock spindles - square.
  - Handrails: 44 x 60 mm hemlock.
    Lower handrail: Not required.
- Moisture content at time of installation: 9-13%.
- Finish as delivered: Prepared and sealed as section M60.
  - Slip resistance value of integral tread – water wet (minimum): Not applicable.
  - Slip resistance value of integral nosing – water wet (minimum): Not applicable.
  - Colour of integral nosing: Not applicable.
- Other requirements: Landing return kit.

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 features (finishes, inserts, nosings and the like): Substrates to be even, dry, sound and free from contaminants. Make good substrate surfaces and prepare/ prime as applied feature manufacturer's recommendations before application.

COMPLETION

910 INSPECTION

- Timing: Two weeks after request by Contract Administrator.
- Period of notice (minimum): 5 working days.

M
Surface finishes

M10 Cement based levelling/ wearing screeds

To be read with Preliminaries/General conditions.

TYPES OF SCREED

110 BONDED CEMENT:SAND LEVELLING SCREEDS TO GROUND FLOORS

- Substrate: In situ concrete slab.
- Screed construction: Fully bonded.
- Thickness:
  - Nominal: 35 mm.
  - Minimum: 25 mm.
  - Maximum: 40 mm.
- Mix:
  - Proportions (cement:sand): 1:3-4.5.
- In situ crushing resistance (ISCR) category: C (5 mm maximum indentation).
- Flatness/ Surface regularity class: SR1.
- Finish: Wood floated, as clause 520.
  - To receive: Carpet tiles.
- Other requirements: None.

115 CEMENT:SAND LEVELLING SCREEDS TO GROUND FLOOR

- Substrate: In situ concrete slab.
- Screed construction: Floating, as clause 290.
  - Reinforcement for crack control: Steel fabric, as clause 392.
- Thickness:
  - Nominal: 50 mm.
  - Minimum: 75 mm.
- Mix:
  - Proportions (cement:sand): 1:3-4.5.
- In situ crushing resistance (ISCR) category: A (3 mm maximum indentation).
  - Mass of test weight: 2 kg.
- Flatness/ Surface regularity class: SR1.
- Finish: Wood floated, as clause 520.
  - To receive: Ceramic tiles.
- Other requirements: None.

130 PROPRIETARY QUICK DRYING LEVELLING SCREEDS TO GROUND FLOOR

- Substrate: In situ concrete slab.
- Screed manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Screed construction: Unbonded, as clause 280.
  - Reinforcement for crack control: Not required.
- Thickness:
  - Nominal: 35 mm.
  - Minimum: 65 mm.
- Mix:
  - Cement: As recommended by screed manufacturer.
  - Proportions: To manufacturer's recommendations.
- In situ crushing resistance (ISCR) category: A (3 mm maximum indentation).
  - Mass of test weight: 2 kg.
- Flatness/ Surface regularity class: SR1.
- Finish: Trowelled, as clause 540.
  - To receive: 5mm sheet flooring.
- Other requirements: None.

GENERALLY/ PREPARATION

205 DESIGN LIFE OF SCREEDS

- Duration: 30 years .
  - Subject to reasonable wear and tear.
- Location: Ground floor .
- 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.
- Standard: In accordance with BS 8204-3.

250 CONDUITS UNDER FLOATING SCREEDS

- Haunching: Before laying insulation for floating screeds, haunch up in 1:4 cement:sand on both sides of conduits.

251 CONDUITS CAST INTO OR UNDER SCREEDS

- Reinforcement: Overlay with reinforcement selected from:
  - 500 mm wide strip of steel fabric to BS 4483, reference D49, or
  - Welded mesh manufactured in rolls from mild steel wire minimum 1.5 mm diameter to BS 1052, mesh size 50 x 50 mm.
- Placing reinforcement: Mid depth between top of conduit and the screed surface.
  - Width of reinforcement (minimum): 300 mm.
- Screed cover over conduit (minimum): 25 mm.

255 PIPE DUCTS/ TRUNKING

- Preformed access ducts: Before laying screed, fix securely to substrates and level accurately in relation to finished floor surface.

260 FULLY BONDED CONSTRUCTION

- Preparation: Generally in accordance with BS 8204-1.
- Removing mortar matrix: Shortly before laying screed, expose coarse aggregate over entire area of hardened substrate.
- Texture of surface: Suitable to accept screed and achieve a full bond over complete area.
- Bonding coat: Slurry, as clause 275.

270 PARTIALLY BONDED CONSTRUCTION

- Preparation: Generally in accordance with BS 8204-1.
- Substrate surface: Brushed finish with no surface laitance.
  - Texture of surface: Suitable to accept screed and achieve a bond over complete area.
- Bonding coat: Manufacturer's standard.

275 CEMENT SLURRY BONDING

- Slurry type: Neat cement.
- Application: Shortly before laying screed, thoroughly wash clean the surface and keep well wetted for several hours. Remove free water then brush in cement slurry bonding coat of creamy consistency.
- Screeding: While slurry is still wet.

280 UNBONDED CONSTRUCTION

- Separation: Lay screed over a suitable sheet dpm or a separating layer.
  - Type: Polyethylene dpm, as section J40/120.
- Installation of separating layer: Lay on clean substrate. Turn up for full depth of screed at abutments with walls, columns, etc. Lap 100 mm at joints.

290 FLOATING CONSTRUCTION

- Insulation:
  - Type: 40 mm polyurethane (PU) foam boards to BS EN 13165 .
  - Installation: Lay with tight butt joints. Continue up at perimeter abutments for full depth of screed.
- Separating layer:
  - Type: Polyethylene sheet minimum 125 micrometres thick (500 gauge)..
  - Installation: Lay over insulation and turn up at perimeter abutments. Lap 100 mm at joints.

295 FLOATING CONSTRUCTION (THIN SHEET IMPACT SOUND INSULATION)
- Substrate: Remove projections that may puncture the insulation.
- Insulation:
  - Type: 5 mm extruded (closed cell) polyethylene foam, density 30-45 kg/m³.
  - Installation: Lay on substrate. Turn up for full depth of screed at perimeter abutments. Lap 100 mm at joints and seal with tape.
  - Perimeter: Maintain isolation of screed.

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.

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.

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) ±5 mm from datum.

350 SCREEDING TO FALLS
- Minimum screed cover: Maintain at the lowest point.
- Falls: Gradual and consistent.
  - Gradient (minimum): 1:60 to gully position .

351 SCREEDING TO RAMPS
- Screed cover: Thickness varies, screed to falls of 1 in 12.
- 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.

365 FLATNESS/SURFACE REGULARITY OF ROOF SCREEDS
- Sudden irregularities: Not permitted.
- Deviation of surface: Measure from underside of a 2 m straightedge (between points of contact), placed anywhere on surface.
  - Permissible deviation (maximum): 6 mm.

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.

383 STAIR SCREEDS TO GROUND FLOOR
- Construction: Fully bonded to treads, risers and landings.
- Risers: Form using fine finish formwork.
- Wearing screed surfaces: Make good with compatible cement:sand mix. Wood float. When hardened remove laitance.

392 GENERAL REINFORCEMENT
- Steel fabric: To BS 4483.
  - Type: A142 .
- Installation: In accordance with BS 8204-1.

435 FORMED JOINTS IN WEARING SCREEDS
- Temporary forms: Square edged with a steel top surface and in good condition.
- Placing screed: Compact thoroughly at edges to give level, closely abutted joints with no lipping.

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.

445 CRACK INDUCING GROOVES IN WEARING SCREEDS
- Groove dimensions:
  - Depth: At least half the depth of wearing screed.
  - Width: As narrow as possible.
- Cutting grooves: Straight, vertical and accurately positioned. Saw cut sufficiently early after laying to prevent random cracking.

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.

550 TROWELLED FINISH TO WEARING SCREEDS
- Floating: To an even texture with no ridges or steps.
- Trowelling: Successively trowel at intervals, applying sufficient pressure to close surface and give a uniform smooth finish free from trowel marks and other blemishes.

560 DEWATERED TROWELLED FINISH TO WEARING SCREEDS
- Dewatering: Immediately after compaction of wearing screeds, remove water using a vacuum process.
- Floating: Without delay, power float to an even texture with no ridges or steps.
- Trowelling: Successively trowel at intervals, applying sufficient pressure to close surface and give a uniform smooth finish free from trowel marks and other blemishes.

600 POWER GROUND FINISH TO WEARING SCREEDS
- Floating: To an even surface with no ridges or steps. Immediately commence curing.
- Grinding: When concrete is sufficiently hard for sand particles not to be torn from surface, remove 1 - 2 mm from surface to give an even glass-paper texture, free from blemishes and trowel marks.
- Cleaning: Remove dust and wash down. Resume curing without delay.

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: seven days.
- 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.

M20 Plastered/ Rendered/ Roughcast coatings

To be read with Preliminaries/ General conditions.

TYPES OF COATING

110 CEMENT:LIME:SAND INTERNAL PLASTER
- Substrate: Brickwork, as section F10.
  - Preparation: Bonding agent.
- Cement:lime:sand mortar:
  - Type: Contractor's choice.
  - Pigment: Not required.
- Undercoats:
  - Mix (cement:lime:sand): First and second coats 1:0.5:4–4.5.
    Cement type: Contractor's choice.
  - Thickness (excluding dubbing out and keys): First coat 8–12 mm (exclusive of keys) and second coat 6–10 mm.
- Final coat:
  - Mix (cement:lime:sand): 1:2:8–9.
    Cement type: Contractor's choice.
    Other requirements: None.
  - Thickness: 8–11 mm prior to scraping.
  - Finish: To match existing.
- Accessories: Stainless steel beads.

280 GYPSUM PLASTER SKIM COAT ON PLASTERBOARD
- Plasterboard: 12.5 and 15mm .
  - Preparation: Bonding agent recommended by plaster manufacturer .
- Plaster: Board finish/ finish plaster to BS EN 13279-1.
  - Manufacturer: Contractor's choice .
    Product reference: Contractor's choice .
  - Thickness: 3mm .
  - Finish: Smooth.
- Accessories: Beads and stops .

GENERAL

413 SAMPLES
- General: Provide representative samples of the following: N/A.

418 CONTROL SAMPLES
- Complete sample areas, being part of the finished work, in locations as follows: External rendering.

421 SCAFFOLDING
- General: Prevent putlog holes and other breaks in coatings.

424 SPECIAL PROTECTION OF HISTORIC PLASTERWORK
- General: Prevent damage and disturbance to retained plasterwork.
- Protection methods: Submit proposals.

MATERIALS AND MARKING OF MORTAR

430 READY-TO-USE CEMENT GAUGED RENDER MORTARS
- Time and temperature limitations: Use within limits prescribed by mortar manufacturer
  - Retempering: Restore workability with water only within prescribed time limits.

438 CEMENTS FOR MORTARS
- Cement: To BS EN 197-1.
  - Types: Portland cement, CEM I.
    Portland slag cement, CEM II.
    Portland fly ash cement, CEM II.
  - Strength class: 32.5, 42.5 or 52.5.
- White cement: To BS EN 197-1.
  - Type: Portland cement, CEM1.
  - Strength class: 52.5.
- Sulfate resisting Portland cement: To BS EN 197-1.
  - Strength class: 42.5.
- Masonry cement: To BS EN 998-1 and Kitemarked.

440 SAND FOR CEMENT GAUGED MORTARS
- Standard: To BS EN 13139.
  - Grading: 0/2 or 0/4 (CP or MP); Category 2 fines.
- Colour and texture: Consistent. Obtain from one source.

443 LIME FOR CEMENT GAUGED MORTARS
- Standard: To BS EN 459-1.
  - Type: CL 90S.

445 PIGMENT FOR COLOURED MORTARS
- Standard: To BS EN 12878.

449 ADMIXTURES FOR CEMENT GAUGED MORTARS
- Suitable admixtures: Select from:
  - Air entraining (plasticizing) admixtures: To BS EN 934-2 and compatible with other mortar constituents.
  - Other admixtures: Submit proposals.
- Prohibited admixtures: Calcium chloride and any admixture containing calcium chloride.

450 CHLORIDE CONTENT OF MORTARS
- Chloride content (maximum): 0.1% by dry mass.

478 HYDRAULIC LIME
- Standard: To BS EN 459-1.
  - Type: Natural hydraulic lime (NHL).

481 READY PREPARED LIME PUTTY
- Type: Slaked directly from CL 90 quicklime to BS EN 459-1, using an excess of water.
  - Maturation: In pits/ containers that allow excess water to drain away.
  - Density of matured lime putty: 1.3-1.4 kg/L.
- Maturation period before use (minimum): 90 days.
- Storage: Prevent drying out or wetting: Protect from frost.

495 MIXING
- Render mortars (site prepared):
  - Batching: By volume. Use clean and accurate gauge boxes or buckets.
  - Mix proportions: Based on damp sand. Adjust for dry sand.
  - Lime:sand: Mix thoroughly. Allow to stand, without drying out, for at least 16 hours before using.
- Mixes: Of uniform consistence and free from lumps. Do not retemper or reconstitute mixes.
- Contamination: Prevent intermixing with other materials.

497 COLD WEATHER
- General: Do not use frozen materials or apply coatings on frozen or frost bound substrates.
- External work: Avoid when air temperature is at or below 5°C and falling or below 3°C and rising. Maintain temperature of work above freezing until coatings have fully hardened.
- Internal work: Take precautions to enable internal coating work to proceed without detriment when air temperature is below 3°C.

PREPARING SUBSTRATES

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

527 RAKING OUT FOR KEY
- Joints in existing masonry: Rake out to a depth of 13 mm (minimum).
  - Dust and debris: Remove from joints.

531 ROUGHENING FOR KEY
- Substrates: Roughen thoroughly and evenly.
  - Depth of surface removal: Minimum necessary to provide an effective key.

536 SPATTERDASH KEY
- Materials:
  - Cement: To BS EN 197-1.
  - Sand: Clean, coarse.
  - Admixtures: SBR bonding agent, Agrément certified.
- Mix proportions (cement:sand): 1:1.5-2.
- Consistency: Thick slurry, well stirred.
- Application: Throw onto dampened background and leave rough.
  - Thickness: 3-5 mm.
- Curing: Controlled to achieve a firm bond to substrate.

538 STIPPLE KEY
- Materials:
  - Cement: To BS EN 197-1.
  - Sand: Clean, coarse.
  - Admixture: SBR bonding agent, Agrément certified.
- Mix proportions (cement:sand): 1:1.5–2.
- Consistency: Thick slurry, well stirred.
- Application: Brushed and stippled to form deep, close textured key.
- Curing: Controlled to achieve a firm bond to substrate.

541 BONDING AGENT APPLICATION
- General: Apply evenly to substrate to achieve effective bond of plaster/ render coat. Protect adjacent joinery and other surfaces.

551 REMOVAL AND RENEWAL OF EXISTING PLASTER/ RENDER
- Location and extent: Agree, at least on a provisional basis, before work commences. Minimize extent of removal and renewal.

556 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 edges.
  - Horizontal and vertical edges: Square cut or slightly undercut.
  - Bottom edges to external render: Do not undercut.
  - Render with imitation joints: Cut back to joint lines.
- Cracks:
  - Fine hairline cracking/ crazing: Leave.
  - Other cracks: Cut out to a width of 75 mm (minimum).
- Dust and loose material: Remove from exposed substrates and edges.

566 REMOVING DEFECTIVE EXISTING PLASTER
- Plaster for removal: Detached, soft, friable, badly cracked, affected by efflorescence or otherwise damaged.
  - Hollow, detached areas: Remove where area of detachment is more than tbc.
- Stained plaster: Remove.
- Removing defective plaster. Cut back to a square, sound edge.
- Faults in substrate (structural deficiencies, damp, etc.): Submit proposals.
- Cracks:
  - Fine hairline cracking/ crazing: Leave.
  - Other cracks: Cut out to a width of 75 mm (minimum).
- Dust and loose material: Remove from exposed substrates and edges.

568 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.
- Faults in substrate (structural deficiencies, additional sources of damp, etc.): Submit proposals.
- Drying out substrates: Establish drying conditions. Leave walls to dry for as long as possible before plastering.
- Dust and loose material: Remove from exposed substrates and edges.

BACKINGS/ BEADS/ JOINTS

600 ADDITIONAL FRAMING SUPPORTS FOR BACKINGS
- Framing: Accurately position and securely fix to give full support to fixtures, fittings and service outlets.
- Support board edges and perimeters: As recommended by board manufacturer to suit type and performance of board.

605 GYPSUM PLASTERBOARD BACKINGS
- Type: To BS EN 520 Type A.
  - Core density (minimum): 650 kg/m³.
- Exposed surface and edge profiles: Suitable to receive specified plaster finish.

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

611 FIXING PLASTERBOARD BACKINGS General
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Accessories, materials and installation methods: As recommended by the plasterboard manufacturer.

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

630 BEADS/ STOPS FOR INTERNAL USE
- Material: Galvanized steel to BS EN 13658-1.

634 BEADS/ STOPS general
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Material: Galv.

636 BEADS/ STOPS FOR EXTERNAL USE
- Material: Stainless steel to BS EN 10088-1, grade 1.4301.

638 ARCH FORM METAL LATHING
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Material: Stainless steel.

640 BEADS/ STOPS GENERALLY

- Location: External angles and stop ends except where specified otherwise.
- Corners: Neat mitres at return angles.
- Fixing: Secure, using longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with substrate.
  - Beads/ stops for external render: Fix mechanically.
- Finishing: After coatings have been applied, remove surplus material while still wet, from surfaces of beads/ stops exposed to view.

646 CRACK CONTROL AT JUNCTIONS BETWEEN DISSIMILAR SOLID SUBSTRATES

- Locations: Where defined movement joints are not required. Where dissimilar solid substrate materials are in same plane and rigidly bonded or tied together.
- Crack control materials:
  - Isolating layer: Building paper to BS 1521.
  - Metal lathing: Externally: Stainless steel ribbed expanded metal.
- Installation: Fix metal lathing over isolating layer. Stagger fixings along both edges of lathing.
- Width of installation over single junctions:
  - Isolating layer: 150 mm.
  - Lathing: 300 mm.
- Width of installation across face of dissimilar substrate material (column, beam, etc. with face width not greater than 450 mm):
  - Isolating layer: 25 mm (minimum) beyond junctions with adjacent substrate.
  - Lathing: 100 mm (minimum) beyond edges of isolating layer.

650 MOVEMENT JOINTS General

- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Installation: Centred over joint in substrate.
  - Fixing: Stainless steel screws chemical fix.

653 SEALANT MOVEMENT JOINTS WITH STOP BEAD EDGINGS general

- Stop beads: ss.
- Installation: Centred over joint in substrate.
  - Joint width: To suit that of structural movement joint in background.
  - Fixing: chemical fix.
- Sealant:
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Preparation and application: As section Z22. Stainless steel screws.

659 PLASTERBOARD JOINTS

- Joints and angles (except where coincident with metal beads). Reinforce with continuous lengths of jointing tape.

673 PLASTERING OVER CONDUITS/ SERVICE CHASES

- General: Prevent cracking over conduits and other services.
- Services chased into substrate: Isolate from coating by covering with galvanized metal lathing, fixed at staggered centres along both edges.

INTERNAL PLASTERING

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

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

718 JUNCTION OF NEW PLASTERWORK WITH EXISTING
- New plasterwork: Finish flush with original face of existing plasterwork to form a seamless junction.

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

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

742 THIN COAT PLASTER
- Preparation for plasters less than 2 mm thick: Fill holes, scratches and voids with finishing plaster.

747 PROJECTION PLASTER
- Application: Evenly and in one continuous operation between angles and joints.
- Finish: A level open textured surface before finishing manually.

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

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

782 TEXTURED/ PATTERNED FINISHES
- Appearance: Consistent and even. Carry out work on each surface as one continuous operation.

786 PLASTERING ON TIMBER LATHING
- Application of undercoat: Force between laths to form continuous keys.

788 NONHYDRAULIC LIME PLASTER UNDERCOATS
- Suction control: Dampen substrate.
- Application: Apply firmly. Trowel to an even surface. Consolidate/ scour as necessary to control shrinkage. Cross scratch to provide an undercut key for the next coat. Do not penetrate through the coat.
  - Key for final coats: Lightly scratch using a wood 'devil' float.
- Curing coatings: Keep damp by light spraying with water until coating is sufficiently firm.

789 THREE LAYER NONHYDRAULIC LIME PLASTER FINAL COAT
- Suction control: Dampen undercoat.
- Application:
  - First layer: Use steel trowel.
  - Second layer: Use wood float in the opposite direction to the first layer.
  - Third layer: Use a steel trowel in the same direction as second layer.
- Consolidation/ scouring: As necessary to control shrinkage. Use a wood cross grain float.
- Finishing: Dampen with a stock brush. Polish with a steel trowel. Finish with a damp stock brush.
- Drying: Keep damp by light spraying with water until coating is sufficiently firm.

EXTERNAL RENDERING

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

815 FLATNESS/ SURFACE REGULARITY OF RENDERING TO RECEIVE CERAMIC TILES
- Sudden irregularities: Not permitted.
- Deviation of render surface: Measure from underside of a 2 m straight edge placed anywhere on surface.
  - Permissible deviation (maximum): 3 mm.

820 DUBBING OUT FOR RENDERING
- General: Correct substrate inaccuracies.
- Thickness of any one coat (maximum): 16 mm.
  - Total thickness (maximum): 20 mm, otherwise obtain instructions.
- Mix: As undercoat.
- Application: Achieve firm bond. Allow each coat to set sufficiently before the next is applied. Comb surface of each coat.

830 ANCHORED MESH REINFORCEMENT
- Application of first undercoat: Through and round mesh to fully bond with solid substrate.

840 UNDERCOATS GENERALLY

- General: Rule to an even surface. Comb to provide a key for the next coat. Do not penetrate the coat.
- Undercoats on metal lathing: Work well into interstices to obtain maximum key.

845 THROWN UNDERCOATS FOR LIME BASED ROUGHCAST (HARLING)

- Application of undercoats and dubbing out: Throw from a casting trowel or scoop.
- Finishing: Press back to give an even thickness without smoothing the surface.

856 FINAL COAT - PLAIN FLOATED FINISH

- Finish: Even, open texture free from laitance.

861 FINAL COAT - SCRAPED FINISH

- Finish: Scraped to expose aggregate and achieve an even texture.

880 CURING AND DRYING

- General: Prevent premature setting and uneven drying of each coat.
- Curing coatings: Keep each coat damp by covering with polyethylene sheet and/ or spraying with water.
  - Curing period (minimum): Four days.
  - Final coat: Hang sheeting clear of the final coat.
- Drying: Allow each coat to dry thoroughly, with drying shrinkage substantially complete before applying next coat.
- Protection: Protect from frost and rain.

M40 Stone/ concrete/ quarry/ ceramic tiling/ mosaic

To be read with Preliminaries/ General conditions.

TYPES OF TILING/ MOSAIC

110 TILING TO KITCHENS

- Tiles: 3 courses above worktop, between worktop and storage cupboards, and 5 course above oven and to the ground behind oven.
  - Manufacturer/ Supplier: British Cermaic Tile.
    Product reference: BCT 16748 colour compendium Mono.
  - Colour: White.
  - Finish: Smooth.
  - Size: 148 x 148 mm.
  - Thickness: 6 mm.
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: Not applicable .
    Surface roughness (Rz) (minimum) BS 1134: Not applicable .
    SlipSTD class: Not applicable.
  - Recycled content: None permitted.
- Background/ Base: As per manufacturer's recommendations.
  - Preparation: As per manufacturer's recommendations.
- Intermediate substrate: As per manufacturer's recommendations.
- Bedding: As per manufacturer's recommendations.
  - Reinforcement: As per manufacturer's recommendations.
  - Adhesive to BS EN 12004: As per manufacturer's recommendations.
- Joint width: 4 mm.
- Grout: As per manufacturer's reccomendations.
  - Type/ classification: As per manufacturer's recommendations.
  - Admixture: As per manufacturer's recommendations.
- Movement joints: minimum of 6mm over structural movement joints or where tiling abuts a different matieral.
- Accessories: None.

111 TILING TO BATHROOMS

- Standard: To EN ISO 10545
- Tiles: 2 courses above WHB, Full tiling to shower areas up to 1050 mm (7 courses) to step one tile at a time down to 3 courses around the full bath.
  - Manufacturer/ Supplier: British Cermaic Tile.
    Product reference: BCT 16748 for reference purposes.
  - Colour: tbc by employer.
  - Finish: Smooth.
  - Size: 148 x 148 mm.
  - Thickness: 6 mm.
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: Not applicable .
    Surface roughness (Rz) (minimum) BS 1134: Not applicable .
    SlipSTD class: Not applicable.
  - Recycled content: None permitted.
- Background/ Base: As per manufacturer's recommendations.
  - Preparation: As per manufacturer's recommendations.
- Intermediate substrate: As per manufacturer's recommendations.
- Bedding: Adhesive bed - notched trowel and buttering method, as clause 651 and 652.
  - Reinforcement: Not applicable.
  - Adhesive to BS EN 12004: As per manufacturer's recommendations.
- Joint width: 4 mm.
- Grout: As per manufacturer's recommendations.
  - Type/ classification: Waterproof tile grout to BS EN 12004.
  - Admixture: As per manufacturer's recommendations.
- Movement joints: minimum of 6mm over structural movement joints or where tiling abuts a different matieral.
- Accessories: None.

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.

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.

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 $\pm$ 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.

M50 Rubber/ plastics/ cork/ lino/ carpet tiling/ sheeting

To be read with Preliminaries/ General conditions.

TYPES OF COVERING

151 SHEETING PUR Safety Laminate

- Location: TO KITCHENS.
- Base: Existing substrate if acceptable, or 6 mm WBP plywood.
  - Preparation: As clause M50/560.
- Fabricated underlay: Plywood as clause M50/560.
- Flooring roll: PUR.
  - Manufacturer: Polyflor.
    Product reference: Polysafe Wood FX PUR.
  - BS EN ISO 13845, class: ESf.
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: 36 wet.
    Surface roughness (Rz) (minimum) to BS 1134: 20 micrometres.
  - Recycled content: None permitted.
  - Width: 2000 mm.
  - Thickness: Not applicable.
  - Colour/ pattern: TBC by the employer.
- Adhesive (and primer if recommended by manufacturer): To be approved by Polyflor, manufacturer.
- Seam welding: Seam welding with minimal joints, with silicon bead perimeter edging.
- Accessories: Skirtings as clause M50/770.
- Finishing: As Reccomended by Manufacturer.
- Other requirements:
  - Flooring to run 100mm under units to front and side
  - All areas with appliances or open areas to be completely covered
  - Chrome/satin threshold strips to all door/material junctions.

152 SHEETING PUR Safety Laminate
- Location: TO BATHROOMS.
- Base: Existing substrate, varies.
  - Preparation: As clause M50/560.
- Fabricated underlay: Plywood as clause M50/560.
- Flooring roll: PUR.
  - Manufacturer: Polyflor.
    Product reference: Polysafe Mosaic PUR.
  - BS EN ISO 13845, class: ESf.
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: 36 wet.
    Surface roughness (Rz) (minimum) to BS 1134: 20 micrometres.
  - Recycled content: None permitted.
  - Width: 2000 mm.
  - Thickness: Not applicable.
  - Colour/ pattern: TBC by the employer.
- Adhesive (and primer if recommended by manufacturer): To be approved by Polyflor, manufacturer.
- Seam welding: Seam welding with minimal joints, with silicon bead perimeter edging.
- Accessories: Skirtings as clause M50/770.
- Finishing: AS Reccomended by Manufacturer.
- Other requirements:
  - Flooring to run 100mm under units to front and side
  - All areas with appliances or open areas to be completely covered
  - Chrome/satin threshold strips to all door/material junctions.

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.

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.

560 PLYWOOD UNDERLAY

- Standard: An approved national standard.
- Bonding quality: To BS EN 314-2 class 2.
- Appearance: To BS EN 635 class II.
- Finish: Sanded.
- Thickness: 6 mm.
- Sheet size: Contractor's choice.
- Substrate: Existing floor boards securely fixed and acceptably level with no gross irregularities or protruding fasteners.
- Laying sheets: Stagger cross joints such that no joint within base and underlay is coincident and with a 0.5-1 mm gap between sheets.
- Fasteners: 25 mm ringed shank or twisted shank nails or divergent staples.
  - Spacing: Commencing at centre of one side of each sheet, at 150 mm grid centres over area of each sheet and at 100 mm centres along perimeter, set in 12 mm from edge.
  - Placement: Driven with heads set flush with surface, and not projecting through underside of base. Not deformed.

LAYING COVERINGS

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.

740 EDGINGS AND COVER STRIPS

- Manufacturer: Contractor's choice .
  - Product reference: Contractor's choice .
- Material/ finish: Chrome/satin .
- Fixing: Secure with edge of covering gripped. Use matching fasteners where exposed to view.

770 SKIRTINGS

- Types: Timber.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Fixing: Secure with top edge straight and parallel with floor.
  - Corners: Mitre joints.

M60 Painting/clear finishing

To be read with Preliminaries/General conditions.

COATING SYSTEMS

110 EMULSION PAINT TO CEILINGS
- Manufacturer: Dulux or equivalent approved.
  - Product reference: Contractor's choice.
- Surfaces: plastered.
  - Preparation: Tape and fill joints and Wash down surfaces.
- Initial coats: As recommended by manufacturer.
- - Number of coats: 1.
- Undercoats: As recommended by manufacturer.
  - Number of coats: n/a.
- Finishing coats: Matt vinyl.
  - Number of coats: 2.

130 GLOSS PAINT TO EXTERNAL SOFTWOOD
- Manufacturer: Dulux or equivalent approved.
  - Product reference: Contractor's choice.
- Surfaces: Previously decorated.
  - Preparation: Degrease and provide key and Remove existing gloss paint.
- Initial coats: As recommended by manufacturer.
  - Number of coats: 1.
- Undercoats: As recommended by manufacturer.
  - Number of coats: 2.
- Finishing coats: Full gloss.
  - Number of coats: 1.

150 EGGSHELL/ SATIN PAINT TO WALLS
- Manufacturer: Crown paints or equivalent approved.
  - Product reference: Contractor's choice.
- Surfaces: Preprimed and sealed.
  - Preparation: Degrease and provide key and Remove existing gloss paint.
- Initial coats: As recommended by manufacturer.
  - Number of coats: 1.
- Undercoats: As recommended by manufacturer.
  - Number of coats: N/A.
- Finishing coats: Acrylic eggshell.
  - Number of coats: 2.

170 MASONRY COATING TO EXTERNAL RENDERED WALLS

- Manufacturer: Dulux or equivalent approved.
  - Product reference: Contractor's choice.
- Surfaces: stone.
  - Preparation: Brush down to remove surface contaminants and Remove loose and spalled material and wash down.
- Initial coats: Silicon based primer.
  - Number of coats: 1.
- Undercoats: As recommended by manufacturer.
  - Number of coats: 2.
- Finishing coats: Silicate masonry paint.
  - Number of coats: 2.

GENERALLY

215 HANDLING AND STORAGE

- Coating materials: Deliver in sealed containers, labelled clearly with brand name, type of material and manufacturer's batch number.
- Materials from more than one batch: Store separately. Allocate to distinct parts or areas of the work.

220 COMPATIBILITY

- Coating materials selected by contractor:
  - Recommended by their manufacturers for the particular surface and conditions of exposure.
  - Compatible with each other.
  - Compatible with and not inhibiting performance of preservative/fire retardant pretreatments.

240 SURFACES NOT TO BE COATED

- Radiator valves and stop valves.

280 PROTECTION

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

PREPARATION

400 PREPARATION GENERALLY

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

420 FIXTURES AND FITTINGS

- Removal: Before commencing work remove: Coverplates, grilles, wall clocks, and other surface mounted fixtures.
- Replacement: Refurbish as necessary, refit when coating is dry.

425 IRONMONGERY

- Removal: Before commencing work: Remove ironmongery from surfaces to be coated.
- Hinges: Remove.
- Replacement: Refurbishment as necessary; refit when coating is dry.

430 EXISTING IRONMONGERY

- Refurbishment: Remove old coating marks. Clean and polish.

440 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.
- Suspected existing hazardous materials: Prepare risk assessments and method statements covering 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 to remove dirt, grease and contaminants.
  - Gloss coated surfaces: Provide key.
- Partly removed coatings:
  - Additional preparatory coats: Apply to restore original coating thicknesses.
  - Junctions: Provide flush surface.
- Completely stripped surfaces: Prepare as for uncoated surfaces.

451 PREVIOUSLY COATED SURFACES - BLAST CLEANING
- Operatives:
  - Trained/ experienced in blast cleaning.
  - Submit evidence of training/ experience on request.
- Dust and nuisance: Minimize.

456 PREVIOUSLY COATED SURFACE - BURNING OFF
- Risk assessment and method statement: Prepare, and obtain approval before commencing work.
- Adjacent areas: Protect from excessive heat and falling scrapings.
- Exposed resinous areas and knots: Apply two coats of knotting.
- Removed coatings: Dispose of safely.

461 PREVIOUSLY COATED WOOD
- Degraded or weathered surface wood: Take back to provide suitable substrate.
- Degraded substrate wood: Repair with sound material of same species.
- Exposed resinous areas and knots: Apply two coats of knotting.

471 PREPRIMED WOOD
- Areas of defective primer: Take back to bare wood and reprime.

481 UNCOATED WOOD
- General: Provide smooth, even finish with arrises and moulding edges lightly rounded or eased.
- Heads of fasteners: Countersink sufficient to hold stoppers/fillers.
- Resinous areas and knots: Apply two coats of knotting.

490 PREVIOUSLY COATED STEEL
- Defective paintwork: Remove to leave a firm edge and clean bright metal.
- Sound paintwork: Provide key for subsequent coats.
- 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.
- Remaining areas: Degrease.

500 PREPRIMED STEEL
- Areas of defective primer, corrosion and loose scale: Take back to bare metal. Reprime as soon as possible.

511 GALVANIZED, SHERARDIZED AND ELECTROPLATED STEEL
- White rust: Remove.
- Pretreatment: Apply one of the following:
  - 'T wash'/ mordant solution to blacken whole surface.
  - Etching primer recommended by coating system manufacturer.

521 UNCOATED STEEL - MANUAL CLEANING
- Oil and grease: Remove.
- Corrosion, loose scale, welding slag and spatter: Remove.
- Residual rust: Treat with a proprietary removal solution.
- Primer: Apply as soon as possible.

570 UNCOATED MASONRY/ RENDERING
- Loose and flaking material: remove.

580 UNCOATED PLASTER
- Nibs, trowel marks and plaster splashes: Scrape off.
- Overtrowelled 'polished' areas: Key lightly.

590 UNCOATED PLASTERBOARD
- Depressions around fixings: Fill with stoppers/ fillers

601 UNCOATED PLASTERBOARD - TO RECEIVE TEXTURED COATING
- Joints: Fill, tape and feather out with materials recommended by textured coating manufacturer.

611 WALL COVERINGS
- Retained wall coverings: Check that they are in good condition and well adhered to substrate.
- Previously covered walls: Wash down to remove paper residues, adhesive and size.

622 ORGANIC GROWTHS
- Dead and loose growths and infected coatings: Scrape off and remove from site.
- Treatment biocide: Apply appropriate solution to growth areas and surrounding surfaces.
- Residual effect biocide: Apply appropriate solution to inhibit re-establishment of growths.

631 PREVIOUSLY PAINTED WINDOWS 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.

640 EXTERNAL POINTING TO EXISTING FRAMES
- Defective sealant pointing: Remove.
- Joint depth: Approximately half joint width; adjust with backing strip if necessary.
- Sealant:
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Preparation and application: As section Z22.

645 SEALING OF INTERNAL MOVEMENT JOINTS
- General: To junctions of walls and ceilings with architraves, skirtings and other trims.
- Sealant: Water based acrylic.
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Preparation and application: As section Z22.

651 EXISTING GUTTERS
- Dirt and debris: Remove from inside of gutters.
- Defective joints: Clean and seal with suitable jointing material.

APPLICATION

711 COATING GENERALLY
- Application standard: In accordance with BS 6150, clause 9.
- Conditions: Maintain suitable temperature, humidity and air quality during application and drying.
- Surfaces: Clean and dry at time of application.
- Thinning and intermixing of coatings: Not permitted unless recommended by manufacturer.
- Overpainting: Do not paint over intumescent strips or silicone mastics.
- Priming coats:
  - Thickness: To suit surface porosity.
  - Application: As soon as possible on same day as preparation is completed.
- Finish:
  - Even, smooth and of uniform colour.
  - Free from brush marks, sags, runs and other defects.
  - Cut in neatly.
- Doors, opening windows and other moving parts: Ease before coating and between coats.

720 PRIMING JOINERY
- Preservative treated timber: Retreat cut surfaces with two flood coats of a suitable preservative before priming.
- End grain: Coat liberally allow to soak in, and recoat.

730 WORKSHOP COATING OF CONCEALED JOINERY SURFACES
- General: Apply coatings to all surfaces of components.

731 SITE COATING OF CONCEALED JOINERY SURFACES
- General: After priming, apply additional coatings to surfaces that will be concealed when fixed in place.
  - Components: Built in window frames.
  - Additional coatings: One undercoat.

760 VARNISHING WOOD
- First coat: Thin with white spirit .
  - Brush well in and lay off avoiding aeration.
- Subsequent coats: Rub down lightly along the grain between coats.

770 EXTERNAL DOORS
- Bottom edges: Prime and coat before hanging doors.

780 BEAD GLAZING TO COATED WOOD
- Before glazing: Apply first two coats to rebates and beads.

790 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.

800 GLAZING

- Etched, sand blasted and ground glass: Treat or mask edges before coating to protect from contamination by oily constituents of coating materials.

810 WATER REPELLENT

- Application: Liberally flood surface, giving complete and even coverage.

M61 Intumescent coatings for fire protection of steelwork

To be read with Preliminaries/General conditions

PROTECTIVE COATING SYSTEMS

120 ON SITE COATING TO EXISTING STEEL INTERNALLY

- Use/ Location: Exposed internal faces of columns, beams and purlins, but excluding cladding rails.
- Fire resistance to BS 476-21: 30 minutes.
- Preparation: Manual cleaning.
- Primer:
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Dry film thickness: As recommended by manufacturer.
- Intumescent coat:
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Finish: Non-visible areas: Basic.
- Top sealer coat: Type recommended by intumescent coating manufacturer.
  - Dry film thickness: Not applicable.
  - Colour: tbc.
- Bolt head/ nut protection: Fire insulating caps.

GENERAL REQUIREMENTS

205 VALIDATION OF MATERIALS

- Project specific evaluation of intumescent coating materials:
  - Standard: To BS 8202-2, clause 4.
  - Test results: Submit on request.

210 WORKING PROCEDURES

- Standard: To BS 8202-2.
- Give notice: Before commencing surface preparation and coating application.
- Quality control: Record project specific procedures for surface preparation and coating application.

215 WORKING CONDITIONS

- General: Maintain suitable temperature, humidity and air quality during coating application and drying.
- Surfaces to be coated: Clean and dry at time of coating application.

220 APPLICATOR'S PERSONNEL

- Operatives: Trained/ experienced in anticorrosive and intumescent coatings.
- Evidence of training/ experience: Submit on request.

270 INSPECTION

- Permit intumescent coating manufacturer to:
  - Inspect work in progress.
  - Inspect quality control records.
  - Take dry film thickness and other measurements.
  - Take samples of coating products.
- Intumescent coating manufacturer's inspection reports: Submit without delay.

280 OFF SITE COATED STEEL

- Handling and erection: Use methods and devices designed to minimise damage to intumescent coatings.

PREPARATION OF SURFACES

315 NEW STEEL - BLAST CLEANING

- Preparation: Remove oil and grease.
- Blast cleaning:
  - Atmospheric condition: Dry.
  - Abrasive: Suitable type and size, free from fines, moisture and oil.
  - Finish: To BS EN ISO 8501-1, preparation grade SA2½, with an average profile of approximately 75 micrometres.
  - Abrasive residues and moisture: Remove.
- Primer: Apply as soon as possible after cleaning and before gingering or blackening appears.

320 EXISTING STEEL - BLAST CLEANING

- Preparation: Remove oil and grease.
- Blast cleaning: Remove existing coatings.
  - Atmospheric condition: Dry.
  - Abrasive: Suitable type and size, free from fines, moisture and oil.
  - Finish: To BS EN ISO 8501-1, preparation grade SA2½, with an average profile of approximately 75 micrometres.
  - Abrasive residues and moisture: Remove.
- Primer: Apply as soon as possible after cleaning and before gingering or blackening appears.

330 EXISTING STEEL - MANUAL CLEANING

- Preparation: Remove oil and grease.
- Finish: To BS EN ISO 8501-1, preparation grade St2. Leave a clean but unpolished dry surface.
- Primer: Apply as soon as possible after cleaning and before gingering or blackening appears.

340 EXISTING STEEL - OVERCOATING

- Preparation: Remove oil and grease.
- Loose or unsound coatings: Remove to a firm edge.
- Exposed steel finish: Manually clean to BS EN ISO 8501-1, grade St2. Leave a clean but unpolished dry surface.
- Existing coatings finish: Abrade to give a good key. Leave a clean, dry surface.
- Primer: Apply one brush coat to bare steel areas. Remove coating edges that lift as a result of priming, and reprime.

APPLICATION OF COATINGS

410 INTUMESCENT DRY FILM THICKNESS (DFT)

- Required dft: Determine for every steel member to give specified period of fire resistance. Use intumescent coating manufacturer's current published loading tables.
  - Special sections and partial fire exposure conditions: Obtain required dft in writing from manufacturer.
- Schedule and drawings: Submit at least two weeks before starting work.
  - Schedule content: Member sizes, weights/thicknesses, loading conditions, etc. showing, for each variant, the exposed perimeter/ sectional area (Hp/A) ratio and required dft.
  - Drawing content: Steelwork drawings marked in colour to show required dft for each member.

420 MEASUREMENT OF INTUMESCENT DFT

- Primer dft: Determine average dft (for deduction from total dft after application of intumescent).
- Intumescent dft: Determine at:
  - 500 mm centres along each coated plane of universal sections (8 planes), and rectangular hollow sections (4 planes).
  - 125 mm centres along coated circular hollow sections, spread evenly around circumference.
- Acceptance standard:
  - Average intumescent dft: Not less than required dft (exclusive of primer and top sealer).
  - Local intumescent dft: Not less than 80% of required dft. Areas greater than 100 mm equivalent diameter with a dft of less than 80% of required dft must be brought up to thickness.

440 BASIC FINISH

- Definition: Reasonably smooth and even. Orange peel, other texture, minor runs and similar minor defects are acceptable.

450 NORMAL DECORATIVE FINISH

- Definition: Good standard of cosmetic finish generally, when viewed from a distance of 5 m or more. Minor orange peel or other texture is acceptable.

460 HIGH DECORATIVE FINISH

- Definition: High standard of evenness, smoothness and gloss when viewed from a minimum distance of 2 m.

490 TOP SEALER COAT

- Application: To achieve dft recommended by manufacturer and to give an even, solid, opaque appearance, free from runs, sags and other visual defects.

520 COMPLETION OF OFF SITE COATED STEEL

- Exposed unprotected areas, including fixings: Following erection of steelwork, apply intumescent coating locally.
- Unscheduled additional connections to erected steelwork: Remove and reinstate intumescent coating locally.

530 RECORDS OF COATED STEEL

- On completion of intumescent coating work, submit:
  - Accurate surface preparation and coating application records.
  - Fire resistance certificates.
  - Intumescent coating manufacturer's recommendations for maintenance and overcoating.

N
Furniture/Equipment

N11 Domestic kitchen fittings, furnishings and equipment

To be read with Preliminaries/ General conditions.

PRODUCTS

311 FITTED BASE UNITS GENERALLY

- Standard: To BS 6222 -2 and -3, and BS EN 14749.
- Manufacturer: Howdens, or equivalent/approved.
  - Product reference: Greenwich Light Oak range.
- Structural performance: To BS 6222-2, test level G.
- Dimensions: To BS EN 1116.
- Surface finishes: To BS 6222-3.
- Size: 600 mm deep
- Doors and drawer fronts:
  - Material: 18 mm High Density Melamine faced chipboard to BS EN 14322.
  - Finish and colour: Greenwich Light Oak.
  - Edges: 3 mm colour matched PVC edging.
  - Other requirements:
    Concealed door hinges
    Magnetic door catches.
- Side panels:
  - Material: 18 mm High Density Melamine faced chipboard to BS EN 14322.
  - Finish and colour: Greenwich Light Oak.
  - Edges: 3 mm colour matched PVC edging.
- Shelves
  - Material: 18 mm High Density Melamine faced chipboard to BS EN 14322
  - Finish and colour: Greenwich Light Oak
  - Quantity: Minimum 1 shelf to base units with 3 alternative heights
  - Other requirements: Shelves to doubles units to be supported on plastic fixtures in 5 locations
- Fixing:
  - General assembly: Using glue and dowel system and pressure clamped to min 80psi for no less than 60 seconds
  - Manufactured specifically for design with no generic drilled hinge holes
  - Designed zinc plated metal brackets to be provided for wall fixing, and between units and worktops
- Other Requirements:
  - Full height, rigid, non-flexible backing panel to be slotted into purpose made grooved side panels, fixed and secured
  - Backing panel on sink unit to be removable for access
  - Decor panels; and
  - 150 mm feet to base units with plinths to be fitted with plastic removable seal
  - Infill panels to be used to close void spaces on wall and base units.
- Accessories: Bin

321 FITTED WALL UNITS GENERALLY

- Standard: To BS 6222 -2 and -3, and BS EN 14749.
- Manufacturer: Howdens, or equivalent/approved.
  - Product reference: Greenwich Light Oak range.
- Structural performance: To BS 6222-2, test level G.
- Dimensions: To BS EN 1116.
- Surface finishes: To BS 6222-3.
- Size: 720 mm high, 300 mm deep
- Doors and drawer fronts:
  - Material: 18 mm High Density Melamine faced chipboard to BS EN 14322.
  - Finish and colour: Greenwich Light Oak.
  - Edges: 3 mm colour matched PVC edging.
  - Other requirements: Concealed door hinges and Magnetic door catches.
- Side panels:
  - Material: 18 mm High Density Melamine faced chipboard to BS EN 14322.
  - Finish and colour: Greenwich Light Oak.
  - Edges: 3 mm colour matched PVC edging.
- Shelves
  - Material: 18 mm High Density Melamine faced chipboard to BS EN 14322
  - Finish and colour: Greenwich Light Oak
  - Quantity: Minimum 2 shelves to wall units with 3 alternative heights
  - Other requirements: Shelves to doubles units to be supported on plastic fixtures in 5 locations
- Fixing:
  - General assembly: Using glue and dowel system and pressure clamped to min 80psi for no less than 60 seconds
  - Manufactured specifically for design with no generic drilled hinge holes
  - Designed zinc plated metal brackets to be provided for wall fixing, and between units and worktops
- Accessories:
  - Add on cornice and pelmet mouldings;
  - Decor panels.

325 HANDLES

- Fixings and adhesives: Bolted through fronts and securely fixed
- Manufacturer: Howdens
  - Product Style: TBC by the Employer
- Size: 128 x 10mm.
- Finish: Chrome, satin anodised aluminium

340 WORKTOPS TO KITCHEN UNITS

- Standard: Laminate to BS EN 438.
- Manufacturer: Howdens, or equivalent/approved.
  - Product reference: tbc by the employer.
- Material: Core: V313 MR chipboard.
- Dimensions: As per proposed floor plans, with 8 mm radius to front edge.
- Exposed edges: Satin anoidised Aluminium strip.
- Support: Units.
- Other requirements:
  - Sink cut out, to include seal strip provided by manufacturer
  - Cut durfaces to be treated, with silicone based sealant, other than those abbuting walls, to be sealed withPVA adhesive/sealer.

350 SINKS, TAPS, TRAPS AND WASTES TO KITCHEN

- Sinks:
  - Standard: To BS EN 13310.
  - Manufacturer: Carron.
    Product reference: Precision Plus 100.
  - Configuration: Sink with drainer.
  - Overall size: 945 x 480.
  - Material: Stainless steel.
    Colour and finish: Polished.
- Tap/ chainstay/ overflow holes: One tap hole, centre. and Overflow hole..
- Taps: Mixer.
  - Manufacturer: Carron.
    Product reference: Lucian.
  - Operation: Manual, Cross Headedl.
  - Material: Chromed steel.
- Wastes: Plug and chain.
  - Standard: To BS EN 274-1, -2 and -3.
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Size: To fit sink .
  - Material: Chromed steel.
  - Tail: Unslotted.
- Traps: Tubular, P type.
  - Standard: To BS EN 274-1, -2 and -3.
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Size: To fit waste.
  - Material: Plastic.
  - Depth of seal (minimum): 75 mm.
- Accessories: Standing tube overflow and Support brackets.

375 DOORS AND DRAWER UNITS GENERALLY

- Manufacturer: Howdens.
  - Product reference: Greenwich Light Oak.
- Sides:
  - Material: 450 mm deep metal drawer box system
  - Requirements: Self lubricating nylon rollers
- Backs and Bottom:
  - Material: Metal drawer box system with 15 mm Melamine faced chipboard to backs and bottom.
  - Finish and colour: Greenwich Light Oak.
    Fronts:
  - Material: 18 mm Melamine faced chipboard
  - Edging: 3mm colour matched ABS edging to all exposed edges
- Load capacity: min. 25 kg.
- Other Requirements: Manufactured specifically for design with no generic drilled hinge holes .

390 SEALANT

- Standard: Not applicable.
- Type: One part silicone.
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
- Colour: white.

395 HINGES
- Standard: Tested and certified to BS 6222.
- Material: Metal, nickel plated.
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
- Other requirements: None.

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: As Engineering Services specification.

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
- Application: As section Z22.
- Bedding: Sink to top of worktop hob to worktop.
- Pointing: Between units and floor,between splash back and worktop.

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.

N13 Sanitary appliances and fittings

To be read with Preliminaries/ General conditions.

PRODUCTS

299 STANDARDS

- All sanitary ware to be installed inaccordance with BS 6465
- All pipework to comply with BS EN 12056
- Lighting in bathrooms to be vapor proof

300 WCS AND CISTERNS GENERAL

- WC standard: To BS 1125.
- Type: Close coupled cistern.
- Pan:
  - Standards: To BS EN 33 and BS EN 997.
  - Manufacturer: Ideal Standard; Armitage Shanks.
    Product reference: Sandringham 21 Range - E8963.
  - Material: Vitreous china, white.
- Seat and cover:
  - Standard: To BS 1254.
  - Manufacturer: As Pan.
    Product reference: Orion - S4045.
  - Material: Plastics.
  - Finish/ Colour: White.
- Pan connector:
  - Standard: To BS 5627.
  - Manufacturer: As Pan.
    Product reference: Contractor's choice.
  - Colour: To match pan.
- Cistern:
  - Standard: To BS 1125.
  - Manufacturer: As Pan.
    Product reference: Sandringham 21 close coupled cistern.
  - Material: Plastics.
  - Finish/ Colour: To match pan.
- Flushing arrangement: Plastics diaphragm type float operated valve and siphon, to BS 1212-3 and float to BS 2456.
  - Manufacturer: As Pan.
    Product reference: Contractor's choice.
  - Operating control: Push button, chrome plated.
  - Water supply connection: As WC schedule.
  - Flush volume: Dual slush 3 or 6 L.
- Flush pipe: Concealed.
  - Manufacturer: As Pan.
    Product reference: Contractor's choice.
  - Material: Plastics, chrome plated.
- Accessories: None.

335 WASH BASINS - PEDESTAL

- Manufacturer: Ideal Standard; Armitage Shanks.
  - Product reference: Sandringham 21 - E8951.
- Size: 550 x 500 mm.
- Material: Vitreous china, white.
- Tap/ Chainstay/ Overflow holes: Two tap holes and Overflow hole.
- Water supply fittings: Pillar taps.
  - Water supply temperature (maximum): User controlled.
  - Flow rate (maximum): Incroporate flow restrictors to deliver 9 L/ minute at 3 bar.
  - Manufacturer: Ideal Standard.
    Product reference: B9859 with ceramic disk.
  - Operation: Manual.
- Wastes: Chain and plug.
  - Standards: To BS EN 274-1, -2 and -3.
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Size: As required.
  - Material: Plastics, chrome plated.
  - Tail: Slotted.
- Traps: Tubular, P type.
  - Standards: To BS EN 274-1, -2 and -3.
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Size: As required.
  - Material: Plastics, self colour.
  - Depth of seal (minimum): 75 mm.
- Accessories: Sandringham 21 Ovalpedestal.

355 BATHS – RECTANGULAR

- Standard: BS EN 232.
- Manufacturer: Ideal Standard; Armitage Shanks.
  - Product reference: Sandringham 21 Steel bath.
- Size: 1700 x 700 mm, (1500, or 1600 if required).
- Volume to overflow (maximum): 174 L to overflow.
- Material: Enamelled pressed steel, white.
- Tap/ Chainstay/ Overflow holes: Two tap holes.
- Water supply fittings: Bath mixer tap with shower hose and handspray.
  - Water supply temperature (maximum): User controlled.
  - Flow rate (maximum): Incroporate flow restrictors to deliver 9 L/ minute at 3 bar.
  - Manufacturer: Ideal Standard; Armitage Shkanks.
    Product reference: B9878 (AA), including shower wall fixings.
- Wastes: Chain and plug.
  - Standards: To BS EN 274-1, -2 and -3.
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Size: DN 40.
  - Material: Plastics, chrome plated.
  - Tail: Slotted.
- Traps: bath trap shallow.
  - Standards: To BS EN 274-1, -2 and -3.
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Size: DN 40.
  - Material: Contractor's Choice.
  - Depth of seal (minimum): 50 mm.
- Accessories: Chrome plated handgrips, slip resistant treat/pattern area and shower rail and curtain.

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: Wastes and traps.

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.
  - Float operated valve: Matched to pressure of water supply.
- Overflow pipe: Fixed to falls and located to give visible warning of discharge.
  - Location: Agreed, 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: Bed and point basins to underside of vanity units. .
- Pointing: Joints between appliances and splashbacks. .

P
Building fabric sundries

P10 Sundry insulation/ proofing work

SUNDRY INSULATION/ PROOFING WORK

To be read with Preliminaries/ General conditions.

TYPES OF INSULATION

110 EAVES ROOF VENTILATORS FOR EXISTING ROOFS

- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Eaves free air space (minimum): As recommended in BRE Report 262.

125 INSULATION LAID BETWEEN CEILING TIES/ JOISTS

- Manufacturer: Rockwool or equivalent/approved.
  - Product reference: Contractor's choice.
- Material: Mineral wool to BS EN 13162.
- Recycled content: Not applicable.
- Thickness: 200 mm.
- Installation requirements:
  - Installation standard: To BS 5803-5.
  - Joints: Butted, no gaps.
  - Insulation at perimeter: Carried over wall plates.
  - Eaves ventilation: Unobstructed.
  - Service holes: Sealed, and debris removed before laying insulation.
  - Electric cables overlaid by insulation: Sized accordingly.
  - Water cistern platforms: Not applicable.

140 INSULATION FITTED BETWEEN RAFTERS

- Manufacturer: Rockwool or equivalent/approved.
  - Product reference: Contractor's choice.
- Material: Mineral wool to BS EN 13162.
- Facing: Not required.
- Recycled content: Not applicable.
- Thickness: To achieve a Uvalue of 0.28 W/m²K.
- Installation requirements:
  - General: Insulation to be friction fitted between rafters with no gaps.
  - Joints: Butted, no gaps.
  - Fasteners: Used where necessary to retain insulation and/ or prevent slumping.
  - Vapour control facing (if specified): Fit insulation with facing on warm side. Staple overlap (if provided) to underside of rafters; tape joints between adjacent overlaps using vapour impermeable adhesive tape.
  - Air space above insulation: Not restricted.
  - Eaves ventilation: Unobstructed.

149 INSULATION FIXED ABOVE RAFTERS

- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Thickness: To achieve a U value of 0.28 W/m²K.
- Number of layers: Contractor's choice.
- Installation requirements:
  - Fixing: Secure to top of rafters, with facing (if provided) on warm side.
  - Fixing centres: 300 mm.
  - Joints: Butt or overlap as recommended by insulation manufacturer, with no gaps. Seal with vapour impermeable adhesive tape.
  - Air space above insulation: Not restricted.
  - Eaves ventilation: Unobstructed.

190 INSULATION FITTED BETWEEN STUDS

- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Material: Encapsulated cotton fibre.
  - Facing: Contractor's choice.
- Recycled content: Not applicable.
- Thickness: 100 mm.
- Installation requirements:
  - Joints: Butted, no gaps.
  - Fasteners: Use where necessary to retain insulation and/ or prevent slumping.

200 INSULATION BLOWN BETWEEN STUDS

- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Material: Cellulose fibre to BS EN 13171.
- Recycled content: Not applicable.
- Thickness: 100 mm.
- Installation requirements:
  - Insulation delivery holes: Submit proposals of locations.
  - Service holes: Sealed, and debris removed before commencing insulation.

212 INSULATION FIXED ACROSS INNER FACE OF STUD WALLING

- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Material: Rigid phenolic foam to BS EN 13166.
- Thickness: To achieve a U value of 0.28 W/m²K.
- Number of layers: One.
- Installation requirements:
  - Fixing: Secure to inner face of studs, with vapour control facing (if provided) on warm side.
  - Fasteners: tbc.
  - Fixing centres: 600mm.
  - Joints: Butt or overlap, as recommended by insulation manufacturer, with no gaps. Seal with vapour impermeable adhesive tape.

217 INSULATION SLABS FIXED TO BACKING WALL

- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Material: Rock wool to BS EN 13162.
- Recycled content: Not applicable.
- Thickness: To achieve a U value of 0.2 W/m²K.
- Installation requirements:
  - Joints: Butted, no gaps. Fit insulation tightly between/ around cladding supports.
  - Fasteners: Stainless steel with minimum 70 mm diameter retaining head.

220 SOUND INSULATION WITHIN TIMBER FRAMED SEPARATING WALL

- Location: Between studs in both frames.
- Manufacturer: Rockwool or equivalent/approved.
  - Product reference: Pro Rox SL 980 46kg/m3.
- Material: Rock BS EN 13162.
- Recycled content: Not applicable.
- Density (minimum): 46 kg/m³.
- Thickness: 100mm.
- Width: Widest practical.
- Installation requirements:
  - Joints: Butted, no gaps.
  - Head fixing: Staples or large head nails.

240 INSULATION FITTED BETWEEN FLOOR JOISTS

- Manufacturer: Rockwool or equivalent/approved.
  - Product reference: ProRox SL980.
- Material: Rock wool to BS EN 13162.
- Recycled content: Not applicable.
- Thickness: 100 mm.
- Installation requirements:
  - Support: 20-25 mm square mesh polyethylene net draped over joists and stapled to sides of joists..
  - Joints: Butted, no gaps.
  - Service holes: Sealed, and debris removed before laying insulation.

250 INSULATION SUPPORTED BETWEEN FLOOR JOISTS

- Manufacturer: Rockwool or equivalent/approved.
  - Product reference: Pro Rox SL980.
- Material: Rock mineral wool slabs.
- Thickness: 100 mm.
- Supports: Saddle clips .
- Installation requirements:
  - Joints: Boards butted, no gaps.

260 ABSORBENT PUGGING

- Manufacturer: Rockwool or equivalent/approved.
  - Product reference: ProRox SL980.
- Density (minimum): 46 kg/m².
- Thickness: 100 mm.
- Installation requirements:
  - Joints: Butted, no gaps.
  - Service holes: Sealed, and debris removed before laying insulation.

270 HEAVY PUGGING
- Material: Clean, dry sand to BS EN 13139 .
- Approximate depth: To provide a minimum mass of 80 kg/m² .
- Installation requirements:
  - Laying: Spread and level to consistent depth between joists and adjacent to walls.
  - Service holes: Sealed, and debris removed before laying insulation.

310 VAPOUR CONTROL LAYER TO TIMBER STUDS
- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Material: 1000 gauge virgin polyethylene .
- Minimum vapour resistance: 250 MN s/g.
- Installation requirements:
  - Setting out: Joints minimized.
  - Method of fixing: Primer and adhesive to concrete blockwork.
  - Joints: At supports only, lapped 150 mm minimum.
  - Openings: Membrane fixed to reveals.
  - Joints and edges: Sealed with double sided tape with vapour resistivity not less than the vapour control layer.
- Penetrations: Sealed.
- Other requirements: Moisture content of timber at time of fixing (maximum): 20% and Prime substrates as necessary.

420 SLEEVED MINERAL WOOL SMALL CAVITY BARRIERS
- Manufacturer: Rockwool or equivalent/approved.
  - Product reference: Contractor's choice.
- Material: Mineral wool sleeved in polyethylene with flanges.
- Fire resistance rating: To BS 476-20, 30/15 integrity/ insulation.
- Size: 65 x 65 mm.
- Installation requirements:
  - Fasteners: Staples at maximum 150 mm centres.
  - Vertical barriers: Fixed by both flanges.
  - Horizontal barriers: Fixed by upper flange only.
  - Joints and intersections: Butted, with barriers compressed along full length to give complete seal.

430 WIRED MINERAL WOOL SMALL CAVITY BARRIERS
- Material: Wire reinforced mineral wool minimum 50 mm thick.
- Fire resistance rating: To BS 476-20, 30/15 integrity/ insulation.
- Installation requirements:
  - Fasteners: Staples at maximum 150 mm centres. Fold cavity barrier if necessary to ensure a tight fit.
  - Joints and intersections: Butted, no gaps.

440 FIRE PROTECTION
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: CP643N,CP644,CP648-S,CP648-E,CP645.
- Material: Ceramic fibre.
- Thickness: TBC.
- Fire resistance rating: To BS 476-21, 30/30 integrity/ insulation.
- Number of layers: TBC.
- Installation requirements: Continuous, with minimum joints.
  - Fasteners: TBC.
- Other requirements: TBC.

P12 Fire stopping systems

To be read with Preliminaries/ General conditions.

GENERAL

110 FIRE STOPPING SYSTEM TO MULTIPLE SERVICE PENETRATIONS
- Penetration seal/ Gap filler: Hilti or equivalent/approved.

140 FIRE STOPPING SYSTEM TO MULTIPLE SERVICES PENETRATIONS ALL APPLICATIONS
- Fire resistance: As clause 240.
- Board barrier:
  - Material: Mineral wool intumescent coated rigid batts as clause P10-140.
    Thickness: 9 mm.
    Number of layers: Two.
  - Framing: tbc.
  - Finish: tbc.
- Capping sealant: Two-part fire resisting polysulfide .
  - Colour: Not applicable.

SYSTEM PERFORMANCE

240 FIRE PERFORMANCE 30/30
- Resistance to fire: To BS 476-20 and -22, 30 minutes integrity and insulation .
- Reaction to fire: In accordance with Building Regulations, Class 0 .
- Smoke resistance:
  - Air leakage rate (maximum): Not applicable.

PRODUCTS

305 PRODUCT CERTIFICATION
- Certification: For products specified generically, submit evidence of compliance with the specification.
- Acceptable evidence: Listing in LPCB Register.

310 BOARDS - CALCIUM SILICATE FIBRE REINFORCED
- Manufacturer: Contractor's choice .
  - Product reference: Contractor's choice .

315 BOARDS - CALCIUM SILICATE FILLED AND FIBRE REINFORCED
- Manufacturer: Contractor's choice .
  - Product reference: Contractor's choice .

320 BOARDS - EXFOLIATED VERMICULITE
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: Submit proposals.

325 BOARDS - MINERAL BOUND LIGHTWEIGHT
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: Contractor's choice .

330 FIRE STOP LAMINATE
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: Submit proposals.
- Strip width: Wider than joint width.

335 INTUMESCENT FOAM
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.

338 INTUMESCENT MASTIC
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.

340 INTUMESCENT MORTAR
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.

342 FIRE RESISTING MORTAR
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.

345 INTUMESCENT PILLOWS
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.
- Composition: Sealed polyethylene bags containing graphite and vermiculite granules treated with fire activated chemicals.
- Integral reinforced eyelets: Required.
- Linking cable: Non-corrosive cotton-coated wire.

350 INTUMESCENT PUTTY
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.

360 MINERAL WOOL RIGID BATTS
- Standard: To BS EN 13162.
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.
- Recycled content: Contractor's choice.

365 MINERAL WOOL RIGID BATTS - ABLATIVE COATED
- Standard: To BS EN 13162.
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.
- Recycled content: Contractor's choice.

370 PIPE COLLAR - CONCEALED INTUMESCENT
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.

375 PIPE COLLAR - INSULATED WRAP
- Manufacturer: Hilti or equivalent/approved .
  - Product reference: tbc.

380 PIPE COLLAR - SURFACE MOUNTED INTUMESCENT
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.

385 SEALANT BACKING MATERIAL
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.

390 SEALANT - FIRE RESISTING SILICONE
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.

395 SEALANT - ONE-PART FIRE RESISTING ACRYLIC
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.

410 SEALANT - TWO-PART FIRE RESISTING POLYSULFIDE
- Manufacturer: Hilti or equivalent/approved.
  - Product reference: tbc.

EXECUTION

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

640 INSTALLING BOARDING
- Position of boarding: Across face of opening.
- Framing: Provide trimming around openings.
- Bedding: Bed boarding on fire resisting silicone.
- Multiple board layers: Stagger joints between layers.
  - Joints: Seal with board adhesive.
- Fixing: Adhesive.
- Other requirements: Finish joint sealant flush with boards and Finish joint sealant flush with boards; rub down to receive paint finish.

650 INSTALLING FIRE STOP LAMINATE
- Fitting of strips: Compress strips and fit into gap so that, as they decompress, the strips wedge themselves in the void.
- Shrink wrapping: Not applicable.
- Joints:
  - Ends of strips: Fit intumescent 'end piece' at both ends of run of fire stop laminate.
  - Joints between strips: Fit two intumescent 'end pieces' at each butt joint.

660 APPLYING INTUMESCENT FOAM
- New joints: Remove builder's debris, mortar droppings, grease, and other contaminants.
- Old joints: Clean and remove existing sealant from each joint.
- Priming: Lightly moisten substrate with water.
- Application: Fill joint to approximately half its depth, and allow foam to expand to face of joint.
- Trimming: Trim excess foam to give a neat, flush appearance.

670 APPLYING INTUMESCENT MORTAR
- Sequence: Install mortar after services are permanently installed.
- Loose dust and combustible materials: Remove from the opening.
- Shuttering: Install suitable shuttering panels to the faces of the opening.
- Temperature: Do not apply mortar when it could be damaged by frost.
- Powder:water ratio: 1 kg:1.2-1.3 L.
- Mortar cure: Do not disturb mortar before final set has taken place.
- Shuttering: Remove after mortar has cured.

680 INSTALLING INTUMESCENT PILLOWS
- Number of pillows (per m² of opening): Number necessary to achieve fire resistance.
- Orientation of bags: Perpendicular to plane of construction element containing opening.

710 INSTALLING MINERAL WOOL BATTS
- Installing batts: Fit tight into void between the penetrating services and the surrounding construction to form a solid barrier.
  - Brackets: Impale batts on proprietary pressed steel brackets at 500 mm maximum centres and not greater than 250 mm from ends of batts..
    Bracket fixing: tbc.
- Face of batts: Flush with the surface of wall, floor or soffit.
- Joints between batts: Close butt joints, seal with acoustic intumescent sealant.
- Gaps between services and barrier: Seal with fire resisting sealant.

730 FIXING PIPE COLLARS
- Collar fixing: Adhesive .
- Gap around collar: Seal with gap filler and sealant.
- Length of wraps: Project 50 mm from each side of the element.

740 INSERTING SEALANT BACKING MATERIAL
- Preparation: Removed debris from service penetration.
- Installation: Insert joint filler with folds or creases.

745 APPLYING SEALANTS GENERALLY
- Application: As section Z22.

750 APPLYING CAPPING SEALANT
- Preparation: Submit proposals.
- Priming: Submit proposals.
- Depth of sealant: 15 mm.
- Temperature: Do not apply water based sealants when they could be damaged by frost.

COMPLETION

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

920 INSPECTION
- Notice for inspection (minimum): 5 working days.

P21 Door/ window ironmongery

To be read with Preliminaries/ General conditions.

PRE-TENDER

10 QUANTITIES AND LOCATIONS
- Quantities and locations of ironmongery are in the bills of quantities .
- Fixing: As sections L10 and L20.

GENERAL

121 IRONMONGERY FROM SINGLE PROPRIETARY RANGE
- Manufacturer: Hafele or equivalent/approved .
  - Product reference: milano range door latches 901.99.506 bathroom latch 901.99.508 .
- Principal material/ finish: Polished chrome, .
- Items unavailable within selected range: Submit proposals.

130 APPROVED SUPPLIERS
- Source: Obtain ironmongery from one of the following: Hafele or equivalent/approved .
- Notification: Submit details of selected supplier.

170 IRONMONGERY FOR FIRE DOORS
- Relevant products: Ironmongery fixed to, or morticed into, the component parts of a fire resisting door assembly.
- Compliance: Ironmongery included in successful tests to BS 476-22 or BS EN 1634-1 on door assemblies similar to those proposed.
  - Certification: Submit CERTIFIRE certificates .
- Melting point of components (except decorative non functional parts): 800°C minimum.

180 CATEGORY OF DUTY FOR DOOR IRONMONGERY
- Standard: To DD 171.
  - Category of duty of doors: Light duty .
- General: Durability of ironmongery components to be compatible with stated category of duty of each door leaf.
  - Exclusions: Ironmongery with specific duty or 'category of use' defined elsewhere.
    Documentation: Before placing orders with suppliers submit documentation showing product compliance with stated category of duty.

DOOR HANGING DEVICES

320 DOOR HINGES TO ALL TIMBER DOORS
- Manufacturer: Hafele or equivalent/approved .
  - Product reference: 926.90.203 .
- Type: roller .
- Size: 102 x 76mm .
- Material/ finish: ss .
- Other requirements: None .

DOOR SECURING DEVICES

515 DOOR LOCKS GENERALLY
- Standard: To BS EN 12209.
- Manufacturer: Contractor's choice .
  - Product reference: Contractor's choice .
- Type: 5 lever mortice lock .
- Backset: 57 mm .
- Material/ finish: Stainless steel faceplate .
- Keying: In master keyed suite .

WINDOW SECURING DEVICES

DOOR FURNITURE

610 LEVER HANDLES GENERALLY
- Standard: To BS EN 1906.
- Manufacturer: Hafella or equivalent/approved .
  - Product reference: latch 901.99.508 bathroom 901.99.508 .
- Style: As schedule .
- Size: As schedule .
- Material/ finish: Polished Chrome, .
- Mounting: Screw fixed plate with fixed spindle .
- Additional requirements: None .

Q
Paving/Planting/Fencing/Site furniture

Q25 Slab/ brick/ sett/ cobble pavings

To be read with Preliminaries/ General conditions.

GENERAL

120 CONCRETE FLAG PAVING SYSTEM General paving
- Subgrade improvement layer: Contractor's choice.
  - Compacted thickness: Contractor's choice.
- Granular sub-base: Highways Agency Type 1 unbound mixture, as section Q20.
  - Compacted thickness: 150 mm.
- Base: Hoggin .
  - Thickness: 100 mm .
- Laying course: Site mixed mortar .
  - Accessories: None .
- Paving units: Concrete flags .
- Jointing: Site mixed mortar .
  - Bond: Straight line .
- Accessories: None .

SYSTEM PERFORMANCE

440 READY MIXED MORTAR general
- Type: Rapid strength mortar.
- Standard/ Performance requirements: In accordance with BS 7533-4.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Consistency: Workable.

445 READY MIXED FINE CONCRETE general
- Standard/ Performance requirements: In accordance with BS 7533-7.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
    Consistency: Workable.

EXECUTION

610 MATERIAL SAMPLES
- Samples representative of colour and appearance of designated materials: Submit before placing orders.
  - Designated materials: Concrete sett paving .

620 ADVERSE WEATHER

- General:
  - Temperature: Do not lay or joint paving if the temperature is below 3°C on a falling thermometer or below 1°C on a rising thermometer.
  - Frozen materials: Do not use. Do not lay bedding on frozen or frost covered bases.
- Paving with mortar joints and/ or bedding:
  - Protect from frost damage, rapid drying out and saturation until mortar has hardened.
- Paving laid and jointed in sand:
  - Stockpiled bedding sand: Protect from saturation.
  - Exposed areas of sand bedding and uncompacted areas of sand bedded paving: Protect from heavy rainfall.
  - Saturated sand bedding: Remove and replace, or allow to dry before proceeding.
  - Laying dry-sand jointed paving in damp conditions: Brush in as much jointing sand as possible. Minimize site traffic over paving. As soon as paving is dry, top up joints and complete compaction.

625 LAYING PAVINGS - GENERAL

- Appearance: Smooth and even with regular joints and accurate to line, level and profile.
- Falls: To prevent ponding.
- Bedding of paving units: Firm so that rocking or subsidence does not occur or develop.
  - Bedding/ Laying course: Consistently and accurately graded, spread and compacted to produce uniform thickness and support for paving units.
- Slopes: Lay paving units upwards from the bottom of slopes.
- Paving units: Free of mortar and sand stains.
- Cutting: Cut units cleanly and accurately, without spalling, to give neat junctions with edgings and adjoining finishes.

630 LEVELS OF PAVING

- Permissible deviation from specified levels:
  - Generally: ± 6 mm.
- Height of finished paving above features:
  - At gullies: +6 to +10 mm.
  - At drainage channels and kerbs: +3 to +6 mm.

635 REGULARITY OF PAVED SURFACES

- Maximum variation in gap under a 3 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface):
  - Precast concrete paving blocks and clay pavers for flexible pavements: 10 mm.
  - Precast concrete flags or natural stone slabs: 3 mm.
- Difference in level between adjacent paving units (maximum): 2 mm.
- Sudden irregularities: Not permitted.

637 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.

645 PROTECTION

- Cleanliness: Keep paving clean and free from mortar droppings, oil and other materials likely to cause staining.
- Materials storage: Do not overload pavings with stacks of materials.
- Handling: Do not damage paving unit corners, arrises, or previously laid paving.
- Mortar bedded pavings: Keep free from traffic after laying:
  - Pedestrian traffic (minimum): 24 hours.
  - Vehicular traffic (minimum): 7 days.
- Access: Restrict access to paved areas to prevent damage from site traffic and plant.

650 CEMENTITIOUS BASES AND SUB-BASES

- General: Protect from moisture loss, if not covered by another pavement course within 2 hours of completion.

655 CONDITION OF SUB-BASES/ BASES BEFORE SPREADING LAYING COURSE

- Trenches and excavation of soft or loose spots in subgrade: Fill and thoroughly compact.
- Granular surfaces: Lay and compact so as to be sound, clean, smooth and close-textured enough to prevent migration of bedding/ laying course materials into the sub-base during compaction and use, free from movement under compaction plant and free from compaction ridges, cracks and loose material.
- Prepared existing and new bound bases (roadbases): Sound, clean, free from rutting or major cracking. Remove sharp stones, projections and debris.
- Sub-base/ Roadbase level tolerances: To BS 7533-7, Annex A.
- Levels and falls: Accurate and within the specified tolerances.
- Drainage outlets: Within 0-10 mm of the required finished level.
- Features in sand bedded paving (including mortar bedded restraints and drainage ironwork): Complete to required levels; adequately bed and haunch in mortar.
- Sub-bases containing cement/ hydraulic binder: Cure for minimum times specified in BS 7533-4.

665 PLANING AND REPAIRS TO EXISTING BASES

- Existing macadam/ asphalt surfaces: Plane to required levels.
- Repairs: Cut out to remove ruts and cracks over 25 mm wide and Cut out depressions, fill to match existing surface and compact.
- Building up existing surfaces to required levels: Regulate using asphalt concrete to BS EN 13108 -1.

710 LAYING FLAG AND SLAB PAVING - SAND LAYING COURSE AND JOINTING

- Standard: In accordance with BS 7533-4.
- Flag installation and cutting: To Interpave 'Concrete flag paving'.
- Laying course:
  - Nominal thickness after compaction: 25 mm.
- Joint width: 2-5 mm.

Q40 Fencing

To be read with Preliminaries/ General conditions.

FENCING SYSTEMS

210 WOODEN POST AND RAIL FENCING
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Standard: To BS 1722-7, type MPR 11/3.
- Height: 1800mm.
- Wood: Softwood.
  - Treatment: Alkaline Copper Quaternary (ACQ).
  - Finish: None.
- Maximum centres of posts: Contractor's choice.
- Method of setting posts: dig out minimum depth of 700 mm prop and concrete .
- Accessories: None.
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-7.

310 CLOSE BOARDED FENCING
- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Standard: To BS 1722-5, type BW 180A.
- Height: 1800 mm.
- Wood: Softwood.
  - Treatment: Submit proposals.
  - Finish: Submit proposals.
- Boards/ rails: Softwood feather edged boards on arris rails.
- Posts: Wood.
- Centres of posts (maximum): 2m.
- Method of setting posts: Submit proposals.
- Accessories: 1 or 2No. single leaf gate per property as drawing C.1.03 .
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-5.

440 BOUNDARY PROTECTION MATERIALS SPECIFICATION
- Minimum BRE 'Green Guide to Specification Online' rating: As drawing tbc.

GATES, POSTS AND STILES

570 GATES
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Sizes: 1830 mm clear opening.
- Posts: Wood.
- Finish as delivered: Unfinished.
- Fittings: Two hook and band hinges, return spring and a heavy duty automatic latch .
  - Finish: Hot dip galvanized to BS EN ISO 1461 .
- Method of fixing: Contractor's choice.
- Accessories: None.

ACCESSORIES

EXECUTION

710 INSTALLATION GENERALLY
- Set out and erect:
  - 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.

720 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: Position post/ strut and fill hole with concrete to not less than the specified depth, well rammed as filling proceeds and consolidated.
- Backfilling of holes not completely filled with concrete: Excavated material, well rammed and consolidated.

730 EXPOSED CONCRETE FOUNDATIONS
- Filling: Compact until air bubbles cease to appear on the upper surface.
- Finishing: Weathered to shed water and trowelled smooth.

740 SETTING POSTS IN EARTH
- Holes: Excavated neatly, with vertical sides and as small as practicable to allow refilling.
- Filling: Position posts/ struts and replace excavated material, well rammed as filling proceeds.

760 NAILED WOOD RAILS
- Length (minimum): Two bays, with joints in adjacent rails staggered.
- Fixing: Nail each length of rail to each post with two 100 mm galvanized nails.
- Rails with split ends: Replace.

765 CLEFT WOOD RAILS
- Length (maximum): 3.05 m.
- Fixing: Rail end section shaped to adequately fill the post mortice. Nail each rail to each prick post with two galvanized nails.
- Rails with split ends: Replace.

770 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.

780 MAKING GOOD GALVANIZED SURFACES
- Treatment of minor damage (including on fasteners and fittings): Low melting point zinc alloy repair rods or powders made for this purpose, or at least two coats of zinc-rich paint to BS 4652.
- Thickness: Apply sufficient material to provide a zinc coating at least equal in thickness to the original layer.

790 SITE PAINTING
- Timing: Prepare surfaces and apply finishes as soon as possible after fixing.

COMPLETION

910 CLEANING
- General: Leave the works in a clean, tidy condition.
- Surfaces: Clean immediately before handover.

920 FIXINGS
- All components: Tighten.
  - Timing: Before handover.

930 GATES
- Hinges, latches and closers: Adjust to provide smooth operation. Lubricate where necessary.
  - Timing: Before handover.

Q50 Site/ street furniture/ equipment

To be read with Preliminaries/ General conditions.

SITE AND STREET FURNITURE

210 CYCLE STANDS

- Manufacturer: Manufacturer: Allpark Ltd.
  - Web: www.allpark.co.uk.
  - Email: sales@allpark.co.uk..
  - Product reference: ALL-30-36].
- Material: Steel.
  - Finish: Hot dip galvanised to BS EN ISO 1461.
  - Colour: None.
- Number of stands: 1No. per property.
- Accessories: None.
- Method of fixing: Surface mounted (Bolts to be provided).

242 BINS

- Manufacturer: Council provided.
  - Product reference: Council provided.
- Material: Council provided.
  - Finish: Council provided.
  - Colour: Council provided.
- Accessories/ Special requirements: Council provided.
- Method of fixing: Council provided.

R
Disposal systems

R10 Rainwater drainage systems

To be read with Preliminaries/ General conditions.

GENERAL

110 GRAVITY RAINWATER DRAINAGE SYSTEM
- Rainwater outlets: Proprietary.
- Gutters: Aluminium.
- Pipework: Aluminium.
- Below ground drainage: As section R12.
- Disposal: To surface water drainage.
- Controls: Not applicable.
- Accessories: tba.

SYSTEM PERFORMANCE

221 COLLECTION AND DISTRIBUTION OF RAINWATER
- General: Complete, and without leakage or noise nuisance.

PRODUCTS

311 ALUMINIUM GUTTERS
- Standard: Agrément certified.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Profile: Ogee.
- Type/ Thickness: Minimum 0.9 mm thickness.
- Nominal size: 125 mm.
- Finish: Polyester powder coating.
- Colour: black.
- Brackets: Rafter type.
  - Fixings: Stainless steel screws.
    Size: 20 x 3.5 mm.
- Accessories:
  - Jointing clips;
  - Leaf guards; and
  - Stop ends.

360 SEALANT FOR GUTTERS
- Type: tbc.

365 PROPRIETARY RAINWATER OUTLETS
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Roof construction: pitched.
  - Roof insulation thickness: tbc.
- Type of grate/ Fittings: Raising pieces to suit insulation thicknesses.
- Outlet: Type and direction to suit pipework with suitable adaptors and connections.
- Accessories: Support plates.

370 ALUMINIUM PIPEWORK
- Standard: Agrément certified.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Type/ Thickness : Minimum 0.9 mm.
- Section: Round.
- Nominal size: 102 mm.
- Finish Painted.
- Colour: black.
- Brackets: Extruded aluminium pipe clips coated as pipes.
  - Fixings: Stainless steel screws.
    Size: 25 x 3.5 mm.
- Accessories: Access fittings.

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
- Joints: Watertight.
- Brackets: Securely fixed.
  - Fixings: Plugged and screwed into masonry.
    Fixing centres: 900 mm.
  - 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.

616 SETTING OUT EAVES GUTTERS - LEVEL
- Setting out: Level and as close as practical to the roof.
- Outlets: Aligned with connections to below ground drainage.

630 INSTALLING RAINWATER OUTLETS
- Fixing: Secure. Fix before connecting pipework.
  - Method: Screw to timber spacing blocks.
- Junctions between outlets and pipework: Accommodate movement in structure and pipework.

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.
- Vertical pipes:
  - 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: Bolted into masonry.
- Distance between bracket fixing centres (maximum): 1200 mm.

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.

680 FIXING INSULATION TO INTERNAL PIPELINES AND GUTTERS

- Fixing: Secure and neat. Provide continuity at supports and leave no gaps. Fix split pipe insulation with the split on 'blind' side of pipeline.
  - Method: Waterproof adhesive.
- Timing: Do not fit insulation until completion of pipe airtightness or leakage testing.

685 IDENTIFICATION OF INTERNAL RAINWATER PIPEWORK

- Standard: In accordance with Water Regulations Advisory Scheme (WRAS) Information and guidance note 9-02-05 and BS 8515.

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): 10 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.

905 INTERNAL PIPEWORK TEST - ENGLAND, WALES, IRELAND AND NORTHERN IRELAND

- Preparation: Temporarily seal open ends of pipework with plugs.
- Test apparatus: Connect a 'U' tube water gauge and air pump to pipework via a plug.
- Testing: Pump air into pipework until gauge registers 38 mm.
- Required performance:
  - Allow a period for temperature stabilization, after which the pressure of 38 mm is to be maintained without loss for at least 3 minutes.

906 INTERNAL PIPEWORK TEST - SCOTLAND

- Standard: To BS EN 12056-2, National annex NG.

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.
- Access covers, rodding eyes, outlet gratings and the like: Secure complete with fixings.

R11 Above ground foul drainage systems

To be read with Preliminaries/ General conditions.

GENERAL

115 ABOVE GROUND FOUL DRAINAGE SYSTEM
- Sanitary and floor drainage outlets: as per performamnce spec.
- Waste pipework: Plastics.
- Discharge stack and branch pipework: Plastics.
- Separate ventilating pipework: PVC-U .
- Accessories: Rodding eyes.
- Disposal: PS.

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.

PRODUCTS

350 MUPVC OR PVC-C PIPEWORK TBC
- Material and standard:
  - MUPVC: To BS 5255 and Kitemark certified; or
  - PVC-C: To BS EN 1566-1, and Kitemark certified.
    Application area code: B.
    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: Contractor's choice.
  - Product reference: Contractor's choice.
- Nominal sizes: DN 50.
- Colour: White where exposed to view.
- Brackets: Plastics pipe clips, painted to match pipes.
  - Fixings: Sherardized steel screws.
    Size: 25 x 4 mm.
- Accessories: Access fittings.

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.
- 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.

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.

635 JOINTING PIPEWORK - BOROSILICATE GLASS

- Jointing: Bolted flange couplings with insert.

640 JOINTING PIPEWORK - CAST IRON - FLEXIBLE COUPLINGS

- Jointing: Paint cut ends of pipes.

650 JOINTING PIPEWORK - COPPER
- Jointing: Integral lead free solder ring capillary fittings:
  - Standard: To BS EN 1254-1, Kitemark certified.
- Connections to appliances and equipment:
  - Compression fittings: To BS EN 1254-2, Kitemark certified.
  - Fittings with threaded ends: To BS EN 1254-4, Kitemark certified.

675 COATED PIPES
- Cutting: Recoat bare metal.

680 ELECTRICAL CONTINUITY
- Joints in metal pipes with flexible couplings: Make with clips (or suitable standard pipe couplings) supplied for earth bonding by pipework manufacturer to ensure electrical continuity.

700 INSTALLING AIR ADMITTANCE VALVES
- 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): 2 working 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.

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

920 SUBMITTALS

- Manufacturer's instructions for grease traps: Handover at completion.

R12 Below ground drainage systems

To be read with Preliminaries/ General conditions.

GENERAL

110 BELOW GROUND DRAINAGE SYSTEM as performance spec

- Surface water and rainwater drainage sources: One piece gullies and covers and Rainwater filter and collection units.
- Foul drainage sources: Composite gullies.
- Land drainage sources: Below ground pipelines from land drainage, as section R13.
- Pressure relief drainage sources: Below ground pipelines from pressure relief drainage, as section R16.
- Pipes, bends and junctions: Plastics - structured wall and PVC-U - solid wall.
  - Accessories: Access points.
    Manholes, inspection chambers, traps, and separators:
    - Inspection chambers - plastics;
    - Manholes and inspection chambers - concrete; and
    - Grease traps and converters.
  - Accessories: Manhole channels and branches - conventional and Sealing for concrete manholes - proprietary sealant.
- Disposal: To sewers and To soakaways, as section R17.
- Accessories – general: Access covers and frames.

PRODUCTS

311 ADAPTORS TO CLAY DRAINAGE tba

- Material and standard: Polypropylene to BS EN 295-1 and Kitemark certified.
- Type: DN 100 discharge stack to DN 100 clay and DN 100 rainwater pipe to DN 100 clay.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.

312 ADAPTORS TO PLASTICS DRAINAGE tbc

- Material and standard: Plastics to BS 4660 and Kitemark certified or to BS EN 1401-1 and Kitemark certified.
- Type: DN 100 rainwater pipe to DN 100 plastics.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.

313 ONE PIECE GULLIES - BACK INLET

- Standards: To BS EN 1253-1, -2, -3, -4 and -5; or
  - Cast iron: To BS 437 and Kitemark certified, or Agrément certified.
  - Clay: To BS EN 295-1 and Kitemark certified, or Agrément certified.
  - Concrete: To BS 5911-6 and Kitemark certified, or Agrément certified.
  - Plastics: To BS 4660 and Kitemark certified, or Agrément certified.
  - Polypropylene: To BS EN 1852-1.
- Material: Plastics.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Sizes: 450 x 300 mm.
- Outlet sizes: DN 100.
- Silt buckets: Plastics.
  - Product reference: N/A.

315 ONE PIECE GULLIES AND COVERS - BACK INLET

- Standards: To BS EN 1253-1, -2, -3, -4 and -5; or
  - Cast iron: To BS 437 and Kitemark certified, or Agrément certified.
  - Clay: To BS EN 295-1 and Kitemark certified, or Agrément certified.
  - Concrete: To BS 5911-6 and Kitemark certified, or Agrément certified.
  - Plastics: To BS 4660 and Kitemark certified, or Agrément certified.
  - Polypropylene: To BS EN 1852-1.
- Material: Plastics.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Sizes: 450 x 300 mm.
- Outlet sizes: DN 100.
- Covers: plastic.
  - Product reference: Contractor's choice.
  - Type: Loose solid plate with cut out for rainwater or waste pipes.
  - Material: Plastics.
  - Sizes: 360 x 310 mm.
  - Loading grades to BS EN 124: A15.
- Silt buckets: None.
  - Product reference: N/A.

329 PIPES, BENDS AND JUNCTIONS - SUPPLY

- Pipes and fittings: From same manufacturer for each pipeline.

352 ACCESS POINTS - PLASTICS - FOUL DRAINAGE

- Standard: To BS 4660 and Kitemark certified, to BS EN 13589-1, or Agrément certified.
- Manufacturer: Contractor's choice.
- Nominal diameter: 100mm.
- Bases:
  - Product reference: Contractor's choice.
- Raising pieces:
  - Product reference: Contractor's choice.
  - Heights: 100 mm.
- Access covers and frames:
  - Product reference: Contractor's choice.
  - Loading grades to BS EN 124: A15.

357 CONNECTORS - SADDLE general

- Standards:
  - Cast iron: To BS 437 and Kitemark certified, or Agrément certified.
  - Clay: To BS EN 295-1 and Kitemark certified, or Agrément certified.
  - Concrete: To BS 5911-6 and Kitemark certified, or Agrément certified.
  - Plastics: To BS 4660 and Kitemark certified, or Agrément certified.
- Material: Plastics.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Sizes: 100 saddle for 50mm waste.

371 RODDING POINTS general

- Standards:
  - Cast iron: To BS 437 and Kitemark certified, or Agrément certified.
  - Clay: To BS EN 295-1 and Kitemark certified, or Agrément certified.
  - Concrete: To BS 5911-6 and Kitemark certified, or Agrément certified.
  - Plastics: To BS 4660 and Kitemark certified, to BS EN 13598-1 or Agrément certified.
- Material: Plastics.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Sizes: DN 100.

401 INSPECTION CHAMBERS - PLASTICS general

- Standard: To BS 7158, BS EN 13598-1, BS EN 13598-2 or Agrément certified.
- Diameter: 450 mm.
- Manufacturer: Contractor's choice.
- Bases:
  - Product reference: Contractor's choice.
- Shaft units:
  - Product reference: Contractor's choice.
- Access covers and frames:
  - Product reference: Contractor's choice.
  - Loading grades to BS EN 124: Not required.

412 MANHOLES AND INSPECTION CHAMBERS – PLASTICS GENERAL

- Standard: To BS EN 13598-2.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Material: Polypropylene.
- Shape: Circular.
- Size: 900 mm diameter.
- Moulded base:
  - Channels and connections: tbc PS.
  - Benching: N/R.
- Formwork for concrete surround: Not required.
- Steps: Not required.
- Vortex flow control unit: Not required.

433 MANHOLE CHANNELS AND BRANCHES - CONVENTIONAL CLAY

- Material: Clay.
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.

435 MANHOLE CHANNELS AND BRANCHES - PREFORMED PLASTICS GENERAL
- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.

471 ACCESS COVERS AND FRAMES - ONE PIECE GULLIES
- Standard: To BS EN 124.
- Types: Single seal.
- Manufacturer: Contractor's choice.
  - Product reference: Submit proposals.
- Materials: Steel.
- Finishes: Hot-dip galvanized.
- Sizes: 900mm x 900 mm.
- Loading grades to BS EN 124: A15.
- Edging trims: Not required.
- Accessories: Stays to restrain covers.

FABRICATION

EXECUTION

610 STRIPPING OUT
- Extent of stripping out: tbc.
- Exposed ends of existing drainage to be abandoned: Seal with concrete (general).

611 EXISTING DRAINS
- Setting out: Before starting work, check invert levels and positions of existing drains, sewers, inspection chambers and manholes against drawings. Report discrepancies.
- Protection: Protect existing drains to be retained and maintain normal operation if in use.

613 EXCAVATED MATERIAL
- Turf, topsoil, hardcore, etc: Set aside for use in reinstatement.

616 SELECTED FILL FOR BACKFILLING
- Selected fill: As-dug material, free from vegetable matter, rubbish, frozen soil and material retained on a 40 mm sieve.
  - Compaction: By hand in 100 mm layers.

623 LOWER PART OF TRENCH – GENERAL
- Trench up to 300 mm above crown of pipe: Vertical sides, width as small as practicable.
  - Width (minimum): External diameter of pipe plus 300 mm.

625 LOWER PART OF TRENCH - TRANSITION DEPTH
- Trench widths up to 300 mm above crown of pipe (maximum):
  - DN 100 pipelines more than 6.0 m deep: 600 mm.
  - DN 150 pipelines more than 5.4 m deep: 700 mm.
  - DN 225 pipelines more than 4.0 m deep: 800 mm.
  - DN 300 pipelines more than 2.9 m deep: 900 mm.

631 TYPE OF SUBSOIL
- General: Where type of subsoil at level of crown of pipe differs from that stated for the type of bedding, surround or support, give notice.

635 FORMATION FOR BEDDINGS

- Timing: Excavate to formation immediately before laying beddings or pipes.
- Mud, rock projections, boulders and hard spots: Remove. Replace with consolidated bedding material.
- Local soft spots: Harden by tamping in bedding material.
- Inspection of excavated formations: Give notice.

641 PIPES AT DIFFERENT LEVELS IN COMMON TRENCH

- Subtrench: Permissible provided soil of step is stable and unlikely to break away.
  - Subtrench not permissible: Trench depth as required for lower pipe. Increase thickness of bedding to upper pipe as necessary.
- Lower pipe: Backfill with compacted granular material to at least half way up higher pipe.
- Clear horizontal distance between pipes (minimum):
  - Pipes up to DN 700: 350 mm.
  - Pipes exceeding DN 700: 500 mm.

651 CLASS A SUPPORT tbc

- Type of subsoil: Clay, sandy clay - firm .
- Blinding:
  - Material: Concrete.
  - Thickness (minimum): 25 mm.
  - Width: Full width of trench.
  - Allow to set before proceeding.
- Pipes:
  - Temporary support: Two-layer pads of bituminous dpc or equivalent, on precast concrete cradles.
  - Clearance under pipes (minimum): 100 mm.
  - Adjust pipes to line and gradient.
- Bed:
  - Material: Concrete.
    Compact thoroughly.
  - Thickness: From top of blinding to pipe invert.
  - Width (minimum): External diameter of pipe plus 200 mm. Shutter vertical sides of concrete or extend concrete across full width of trench.
- Initial testing before placing support: Not required.
- Support:
  - Material: Concrete.
  - Compact thoroughly.
  - Height: Halfway up each side of pipe.
  - Width: Full width of concrete bed or full width of trench.
- Backfilling:
  - Material: Protective cushion of selected fill.
  - Depth: To 150 mm (250 mm for adoptable sewers) above crown of pipe.
  - Compaction: By hand in 100 mm layers.

680 CONCRETE SURROUND FOR PIPE RUNS NEAR FOUNDATIONS

- Class Z surround: Provide in locations where bottom of trench is lower than bottom of foundation and as follows (horizontal clear distance between nearest edges of foundations and pipe trenches):
  - Trenches less than 1 m from foundations: Top of concrete surround not lower than bottom of foundation.
  - Trenches more than 1 m from foundations: Top of concrete surround not lower than D mm below bottom of foundation, where D mm is horizontal distance of trench from foundation, less 150 mm.

683 LAYING PIPELINES

- Laying pipes: To true line and regular gradient on even bed for full length of barrel with sockets (if any) facing up the gradient.
- Ingress of debris: Seal exposed ends during construction.
- Timing: Minimize time between laying and testing.

685 JOINTING PIPELINES

- Connections: Durable, effective and free from leakage.
- Junctions, including to 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.
- Allowance for movement: Provide and maintain appropriate clearance at ends of spigots as fixing and jointing proceeds.
- Jointing material: Do not allow to project into bore of pipes and fittings.

687 CONCRETE SURROUND FOR CROSSOVERS

- Class Z surround: Provide where two pipelines (other than plastics pipes) cross with less than 300 mm separation.
  - Extent, on both pipes: 1 m centred on the crossing point, and beyond as necessary to come within 150 mm of nearest flexible joints.

689 PIPELINES PASSING THROUGH STRUCTURES

- Pipelines that must be cast in or fixed to structures (including manholes, catchpits and inspection chambers): Provide 600 mm long rocker pipes adjacent to the external face of the structure (or both faces where appropriate, e.g. walls to footings), with flexible joints at both ends.
  - Distance to rocker pipe from structure (maximum):150 mm.
- Provision for movement for pipelines that need not be cast in or fixed to structures (e.g. walls to footings):
  - Rocker pipes as specified above; or
  - Openings in the structures to give 50 mm minimum clearance around the pipeline. Closely fit a rigid sheet to each side of opening to prevent ingress of fill or vermin.

691 BENDS AT BASE OF SOIL STACKS

- Type: Nominal 90° rest bends.
  - Radius to centreline of pipe (minimum): 200 mm.
- Height of invert of horizontal drain at base of stack below centreline of lowest branch pipe (minimum): 450 mm.
- Bedding: Do not impair flexibility of pipe couplings.
  - Material: Concrete (general).

693 DIRECT CONNECTION OF GROUND FLOOR WCS TO DRAINS

- Drop from crown of WC trap to invert of drain (maximum): 1.5 m.
- Horizontal distance from the drop to a ventilated drain (maximum): 6 m.

695 BACKDROP PIPES OUTSIDE MANHOLE WALLS

- Excavation beneath backdrop pipe: Backfill.
  - Material: Concrete.
- Pipe encasement:.
  - Material: Concrete.
  - Thickness (minimum): 150 mm.

697 INSTALLING FLEXIBLE COUPLINGS

- Ends of pipes to be joined: Cut cleanly and square.
- Outer surfaces of pipes to be joined: Clean and smooth. Where necessary, e.g. on concrete or iron pipes, smooth out mould lines and/ or apply a cement grout over the sealing area.
- Clamping bands: Tighten carefully to make gastight and watertight seals.

699 CONNECTIONS TO SEWERS

- General: Connect new pipework to existing adopted sewers to the requirements of the adopting authority or its agent.

705 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.

711 TRENCH SUPPORTS

- Removal of trench supports and other obstacles: Sufficient to permit compacted filling of all spaces.

713 INSTALLING ROOT BARRIERS

- Root barrier installation: Full depth of excavation. Fit closely to trench wall nearest the tree.

715 BACKFILLING TO PIPELINES

- Backfilling above top of surround or protective cushion: Material excavated from trench, compacted in layers 300 mm (maximum) thick.
- Heavy compactors: Do not use before there is 600 mm (total) of material over pipes.

718 BACKFILLING OVER CONCRETE

- Minimum times from placing concrete:
  - Backfilling generally: 24 h.
  - Heavy compactors and traffic loads: 72 h.

720 BACKFILLING UNDER ROADS AND PAVINGS

- Backfilling from top of surround or protective cushion up to formation level: Granular sub-base material, laid and compacted in 150 mm layers.

722 PUBLIC ROADS AND PAVINGS – ENG, WALES, SCOT

- Excavating and backfilling of trenches: To Department for Transport 'Specification for the reinstatement of openings in highways'.

724 PUBLIC ROADS AND PAVINGS - NI

- Excavating and backfilling of trenches: To Northern Ireland Road Authority and Utilities Committee 'Specification for the reinstatement of openings in roads – code of practice'.

726 FOAMED CONCRETE BACKFILL

- Preparation: Seal off openings in, and ends of, abandoned pipelines and ducts. Seal off cavities in or next to the excavation which are not to be filled.

732 TEMPORARY BRIDGES

- Trench bridges: As necessary to prevent construction traffic damaging pipes after backfilling.

736 INSTALLING RODDING POINTS

- Bedding and surround:
  - Material: Concrete (general).
  - Thickness (minimum): 100 mm.
- Permissible deviation in level of external covers and gratings: +0 to -6 mm.

759 LAYING PREFORMED PLASTICS CHANNELS, BRANCHES AND BENCHING

- Main channel: Bed solid in 1:3 cement:sand mortar.
  - Branches: Connect to channel, preferably at half pipe level, so that discharge flows smoothly in direction of main flow.
  - Connecting angles more than 45° to direction of flow: Use three-quarter section channel bends.
- Bedding: 1:3 cement:sand mortar. Use clips or ensure adequate mechanical key.
- Benching:
  - Material: Concrete (general).
  - Profile: Rise vertically from top of main channel to a level not lower than soffit of outlet pipe, then slope upwards at 10% to walls.
  - Topping:
    Material: 1:3 Cement:sand mortar.
    Application: Before benching concrete has set, and with dense smooth uniform finish.

761 LAYING SEALED ACCESS FITTINGS, BRANCHES AND BENCHING

- Unused branches: Fit caps.
- Bedding: 1:3 cement:sand mortar.
- Benching:
  - Material: Concrete (general).
    Profile: 10% fall from manhole walls to component rim.
  - Topping:
    Material: 1:3 Cement:sand mortar.
    Application: Before benching concrete has set, and with dense smooth uniform finish.

771 INSTALLING OUTFALLS

- Pipe outflow invert (minimum): Seasonal peak level or 150 mm above normal water level, whichever is the higher.
- Pipe surround and backfill to the last 2 m run of drain: Excavated subsoil, rammed home.

776 EXPOSED OPENINGS IN INSPECTION CHAMBERS, ACCESS POINTS, FITTINGS AND EQUIPMENT

- General: Fit purpose made temporary caps. Protect from site traffic.

COMPLETION

901 REMOVAL OF DEBRIS AND CLEANING

- Preparation: Lift covers to manholes, inspection chambers and access points. Remove mortar droppings, debris and loose wrappings.
  - Timing: Before cleaning, final testing, CCTV inspection if specified, and immediately before handover.
- Cleaning: Thoroughly flush pipelines with water to remove silt and check for blockages. Rod pipelines between access points if there is any indication that they may be obstructed.
- Washings and detritus: Do not discharge into sewers or watercourses.
- Covers: Securely replace after cleaning and testing.

903 TEMPORARY MEASURES

- Water used to stabilize tanks and the like during installation: Drain.

911 TESTING AND INSPECTION

- Dates for testing and inspection: Give notice.
  - Period of notice: 5days.

921 FINAL TESTING OF PRIVATE GRAVITY DRAINS AND SEWERS UP TO DN 300

- Before testing:
  - Cement mortar jointing: Leave 24 h.
  - Solvent welded pipelines: Leave 1 h.
- Standard: To Building Regulations.
- Method: Water.

941 WATER TESTING OF MANHOLES AND INSPECTION CHAMBERS

- Timing: Before backfilling.
- Standard:
  - Exfiltration: To BS EN 1610.
  - Method: Testing with water (method W).
  - Infiltration: No identifiable flow of water penetrating the chamber.

971 CCTV INSPECTION OF PRIVATE PIPELINES

- General: Carry out and record internal inspection using CCTV equipment.
  - Locations to be inspected: Foul and surface water drains.
- Illumination: Of adequate intensity.
- Recording: Provide continuous position recording, still photographs and stopping of the camera at any point.
  - Copy of videotape recording: Submit.

976 CCTV INSPECTION OF ADOPTABLE PIPELINES

- General: Permit the Adopting Authority or its agent to carry out and record internal CCTV inspection of pipelines and associated manholes after completion.
  - Locations to be inspected: Foul and surface water drains.
- Pipelines under highways: Complete construction, except for laying of wearing course, before inspection.

978 LIFTING KEYS

- Lifting keys: Supply suitable keys for each type of access cover.
  - Timing: At completion.

980 INSTRUCTIONS

- Manufacturer's user instructions: Submit for grease traps and converters.

Z
Building fabric reference specification

Z12 Preservative/ fire retardant treatment

To be read with Preliminaries/ General conditions.

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

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

130 PRESERVATIVE TREATMENT SOLUTION STRENGTHS/ TREATMENT CYCLES
- General: Select to achieve specified service life and to suit treatability of specified wood species.

140 COPPER-ORGANIC PRESERVATIVE TREATMENT
- Solution:
  - Manufacturer: Contractor's choice.
    Product reference: Contractor's choice.
  - Colour: Green .
  - Application: High pressure impregnation.
- Moisture content of wood:
  - At time of treatment: Not more than 28%.
  - After treatment: Timber to be surface dry before using.

610 MAKING GOOD TO PRESERVATIVE TREATMENT ON-SITE
- Preservative solution: Compatible with off-site treatment.
- Application: In accordance with preservative manufacturer's recommendations.

620 MAKING GOOD TO FIRE RETARDANT TREATMENT ON-SITE
- Fire retardant: Compatible with off-site treatment.
- Application: In accordance with fire retardant manufacturer's recommendations.

Z20 Fixings and adhesives

To be read with Preliminaries/ General conditions.

PRODUCTS

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

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

330 NAILED TIMBER FASTENERS
- Nails:
  - Steel: To BS 1202-1 or BS EN 10230-1.
  - Copper: To BS EN 1202-2.
  - Aluminium: To BS 1202-3.

340 MASONRY FIXINGS
- Light duty: Plugs and screws.
- Heavy duty: Expansion anchors or chemical anchors.

350 PLUGS
- Type: Proprietary types to suit substrate, loads to be supported and conditions expected in use.

360 ANCHORS
- Types:
  - Expansion: For use in substrate strong enough to resist forces generated by expansion of anchor.
  - Adhesive or chemical:
    For use in substrate where expansion of anchor would fracture substrate.
    For use in irregular substrate where expansion anchors cannot transfer load on anchor.
  - Cavity: For use where the anchor is retained by toggles of the plug locking onto the inside face of the cavity.

370 WOOD SCREWS
- Type:
  - Wood screws (traditional pattern).
    Standard: To BS 1210.
    - Wood screws.
    Pattern: Parallel, fully threaded shank or twin thread types.
- Washers and screw cups: Where required are to be of same material as screw.

380 MISCELLANEOUS SCREWS
- Type: To suit the fixing requirement of the components and substrate.
  - Pattern: Self-tapping, metallic drive screws, or power driven screws.
- Washers and screw cups: Where required to be of same material as screw.

390 ADHESIVES GENERALLY
- Standards:
  - Hot-setting phenolic and aminoplastic: To BS 1203.
  - Thermosetting wood adhesives: To BS EN 12765.
  - Thermoplastic adhesives: To BS EN 204.

410 POWDER ACTUATED FIXING SYSTEMS
- Types of fastener, accessories and consumables: As recommended by tool manufacturer.

EXECUTION

610 FIXING 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/ sleeves to avoid bimetallic corrosion.
- Appearance: Fixings to be in straight lines at regular centres.

620 FIXING THROUGH FINISHES
- Penetration of fasteners and plugs into substrate: To achieve a secure fixing.

630 FIXING PACKINGS
- Function: To take up tolerances and prevent distortion of materials and components.
- Limits: Do not use packings beyond thicknesses recommended by fixings and fasteners manufacturer.
- Locations: Not within zones to be filled with sealant.

640 FIXING CRAMPS
- Cramp positions: Maximum 150 mm from each end of frame sections and at 600 mm maximum centres.
- Fasteners: Fix cramps to frames with screws of same material as cramps.
- Fixings in masonry work: Fully bed in mortar.

650 NAILED TIMBER FIXING
- Penetration: Drive fully in without splitting or crushing timber.
- Surfaces visible in completed work: Punch nail heads below wrot surfaces.
- Nailed timber joints: Two nails per joint (minimum), opposed skew driven.

660 SCREW FIXING
- Finished level of countersunk screw heads:
  - Exposed: Flush with timber surface.
  - Concealed (holes filled or stopped): Sink minimum 2 mm below surface.

670 PELLETED COUNTERSUNK SCREW FIXING
- Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
- Pellets: Cut from matching timber, match grain and glue in to full depth of hole.
- Finished level of pellets: Flush with surface.

680 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.

690 USING POWDER ACTUATED FIXING SYSTEMS

- Powder actuated fixing tools: To BS 4078-2 and Kitemark certified.
- Operatives: Trained and certified as competent by tool manufacturer.

700 APPLYING ADHESIVES

- Surfaces: Clean. Adjust 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.

Z21 Mortars

To be read with Preliminaries/ General conditions.

CEMENT GAUGED MORTARS

110 CEMENT GAUGED MORTAR MIXES
- Specification: Proportions and additional requirements for mortar materials are specified elsewhere.

120 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 in a mortar mix 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.

131 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.

135 SITE MADE LIME:SAND FOR CEMENT GAUGED MASONRY MORTARS
- Permitted use: Where a special colour is not required and in lieu of factory made ready-mixed material.
- Lime: Nonhydraulic to BS EN 459-1.
  - Type: CL 90S.
- Mixing: Thoroughly mix lime with sand, in the dry state. Add water and mix again. Allow to stand, without drying out, for at least 16 hours before using.

160 CEMENTS FOR MORTARS
- Cement: To BS EN 197-1 and CE marked.
  - Types: Portland cement, CEM I.
    Portland limestone cement, CEM II/A-L or 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:
  - Type: 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.
- Masonry cement: To BS EN 413-1 and CE marked.
  - Class: MC 12.5.

180 ADMIXTURES FOR SITE MADE CEMENT GAUGED 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.

190 RETARDED READY TO USE CEMENT GAUGED MORTAR
- Standard: To BS EN 998-2.
- Lime for cement:lime:sand mortars: Nonhydraulic to BS EN 459-1.
  - Type: CL 90S.
- Pigments for coloured mortars: To BS EN 12878.
- Time and temperature limitations: Use within limits prescribed by mortar manufacturer.
  - Retempering: Restore workability with water only within prescribed time limits.

200 STORAGE OF CEMENT GAUGED MORTAR MATERIALS
- Sands and aggregates: Keep different types/ grades in separate stockpiles on hard, clean, free-draining bases.
- Factory made ready-mixed lime:sand/ ready to use retarded mortars: Keep in covered containers to prevent drying out or wetting.
- Bagged cement/ hydrated lime: Store off the ground in dry conditions.

210 MAKING CEMENT GAUGED MORTARS
- 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.
- Working time (maximum): Two hours at normal temperatures.
- Contamination: Prevent intermixing with other materials.

LIME:SAND MORTARS

310 LIME:SAND MORTAR MIXES
- Specification: Proportions and additional requirements for mortar materials are specified elsewhere.

320 SAND FOR LIME:SAND MASONRY MORTARS
- Type: Sharp, well graded.
  - Quality, sampling and testing: To BS EN 13139.
  - Grading/ Source: As specified elsewhere in relevant mortar mix items.

345 ADMIXTURES FOR HYDRAULIC LIME:SAND MORTARS
- Air entraining (plasticizing) admixtures: To BS EN 934-3 and compatible with other mortar constituents.
- Prohibited admixtures: Calcium chloride, ethylene glycol and any admixture containing calcium chloride.

350 STORAGE OF LIME:SAND MORTAR MATERIALS

- Sands and aggregates: Keep different types/ grades in separate stockpiles on hard, clean, free-draining bases.
- Ready prepared nonhydraulic lime putty: Prevent drying out and protect from frost.
- Nonhydraulic lime:sand mortar: Store on clean bases or in clean containers that allow free drainage. Prevent drying out or wetting and protect from frost.
- Bagged hydrated hydraulic lime: Store off the ground in dry conditions.

360 MAKING LIME:SAND MORTARS GENERALLY

- Batching: By volume. Use clean and accurate gauge boxes or buckets.
- Mixing: Mix materials thoroughly to uniform consistency, free from lumps.
- Contamination: Prevent intermixing with other materials, including cement.

390 KNOCKING UP NONHYDRAULIC LIME:SAND MORTARS

- Knocking up before and during use: Achieve and maintain a workable consistency by compressing, beating and chopping. Do not add water.
  - Equipment: Roller pan mixer or submit proposals.

400 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.
- Working time: Within limits recommended by the hydraulic lime manufacturer.

Z22 Sealants

To be read with Preliminaries/General conditions.

PRODUCTS

310 JOINTS tbc
- Primer, backing strip, bond breaker: Types recommended by sealant manufacturer.

EXECUTION

610 SUITABILITY OF JOINTS
- Presealing checks:
  - Joint dimensions: Within limits specified for the sealant.
  - Substrate quality: Surfaces regular, undamaged and stable.
- Joints not fit to receive sealant: Submit proposals for rectification.

620 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.

630 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.

BILL NR 3

SCHEDULE OF WORKS

		Qty	Unit	Rate	£ p
	SECTION NR 3 **SCHEDULE OF WORKS**				
	SUMMARY OF WORKS				
A	To be read in conjunction with existing, proposed layout and elevation drawings along with SE and M&E drawings, specifications, details and sections.	1	Item		
B	Conversion works of a fire damaged and disused mixture of flats and maisonettes back to the outwardly appearance of the original terrace façade and comprising 2No. four bed houses; 2No. three bed maisonettes and 2No. two bed ground floor flats.	1	Item		
C	The property requires a considerable amount of clearance and subsequent investigative work, inclusive of the removal of existing protective scaffold and the reinstatement of specialist scaffold to protect and support the structure	1	Item		
	INVESTIGATION WORKS				
	Note: Investigation works to be undertaken in accordance with clause C11 within the NBS section.				
D	The contractor is deemed to appoint specialist contractors to undertake the following surveys: Asbestos, drainage, CCTV and flue investigation. On completion contractor is to undertake works as required upon CA instruction (provisional sums included later).	1	Item		
E	In order to establish works required to fire damaged or otherwise defective timbers, contractor is to expose existing timber members to roofs, flooring, lintels etc for CA investigation.	1	Item		
	GENERAL				
F	The contractor is to engage with Building Control (Thanet District Council) for the duration of works to ensure satisfactory, timely inspection. Obtain certification on completion of works.	1	Item		
G	Maintain the site in a clean and tidy condition for the duration of the works and ensure that means of escape and also the Health and Safety of the Contractor's staff/operatives and general public is taken into account at all times. It is imperative that the site is locked and secured at the end of each working day.	1	Item		
H	Contractor shall include for a temporary alarm and full CCTV security protection for the duration of the contract.	1	Item		
I	The specification is to be read in conjunction with all relevant drawings as stated in Section One, together with all information contained within all sections and appendices to this specification, the structural, Mechanical and Electrical specifications and Pre-Construction Health and Safety Information.	1	Item		

		Qty	Unit	Rate	£ p
	GENERAL (Cont'd)				
	NB: Where the items in this Schedule or the information on drawings etc. conflict with the structural engineers design, or M&E design and specifications, the structural engineers and M&E design shall take precedence in terms of technical specification.				
A	The Contractor is to undertake a condition survey of internal and external areas surrounding the work/areas to be affected by the works and provide a photographic record to the CA/Client, noting all defects prior to the commencement of works.	1	Item		
B	The Contractor shall produce a detailed programme of works for the Contract Administrator's approval two weeks prior to the commencement of works on site.	1	Item		
C	The Contractor shall be responsible for programming sub-contractor's work.	1	Item		
D	The contractor shall liaise with both the CA and Building Control (Thanet District Council) and submit RAMS for approval on a safe method of working within the building to the appointed Principal Designer. Specifically, protection of the site and the provision of adequate vertical support and lateral bracing of currently unrestrained party walls damaged by fire whilst works of investigation, reinstatement and refurbishment are taking place. All as suggested below.	1	Item		
	SCAFFOLDING				
E	Design and erect fully independent external scaffolding, including temporary roof protection and internal bracing scaffolding to stabilise the perimeter and party walls. It is envisaged that this could be achieved by a normal access scaffold behind each elevation with ladder beam ties between the two scaffolds. It should extend at least up to second floor level with ties to the elevations utilising the existing door and window openings. The design to be approved by the consulting structural engineer.	1	Item		
F	Where necessary provide, erect, maintain, alter, adapt, shift and dismantle upon completion all necessary scaffolding, towers, ladders, hoists protective fences etc., all as previously described to afford access to all parts of the building where works are carried out. All access routes shall be protected.	1	Item		
	TEMPORARY WORKS/EXISTING SERVICES				
G	Isolate all existing electrical and mains supply to dwelling and provide temporary electrical supply for construction works. Lighting and 240v supply to be sufficiently earthed to contractor's design.	1	Item		

		Qty	Unit	Rate	£ p
	TEMPORARY WORKS/EXISTING SERVICES (Cont'd)				
A	Isolate all existing supplies throughout the property and allow for appointment of electrical/gas/water suppliers for renewal of services. (Provisional sum for new connections included later).	1	Item		
B	Contractor to provide temporary mains water supply stand pipe for the duration of the contract.	1	Item		
C	Contractor also to include for repositioning of neighbouring properties TV aerials/satellite dishes in the event of signal disruption caused by the proposed scaffolding.	1	Item		
D	The Contractor is to allow for temporarily cordoning off all areas of the site directly affected by the works through means of 1.8m high proprietary freestanding anti-climb metal fence (Heras or equal and approved) as agreed with the CA.	1	Item		
E	The Contractor is to allow to isolate and disconnect and remove all redundant existing electrical, mechanical supplies/services as necessary to facilitate the works as indicated within M&E Outline Specification (Appendix B).	1	Item		
F	Allow for the jetting and clearance of all existing sub-ground level drainage through to main drainage connection	1	Item		
G	The Contractor is deemed to submit all required application forms along with fees to the Highway Authority in order to gain approval of a pathway closure to the front and side of the property to enable the works.	1	Item		
	ASBESTOS				
H	The Contractor is to undertake the necessary preparatory works to the fire damaged area in order to provide safe access to all areas for an asbestos specialist to undertake a full asbestos survey of the site.	1	Item		

		Qty	Unit	Rate	£ p
	DEMOLITION/STRIP OUT REFER TO NBS CLAUSES - C20, C41, C42, C45, C55, C90 and D20				
	Internal Strip Out				
A	Completely and entirely strip out and clear all areas affected by the proposed internal works, to include all remaining furniture (fixed or unfixed), floor covering, shelving, material, storage equipment, all associated bearers/brackets/supports, rubbish/debris deemed to be redundant in order to leave totally empty. Clear away all arising from site.	1	Item		
B	Further to isolation of supplies, remove all sanitary ware including WCs, basins, shower trays, cistern, baths, brackets, bearers, handrails and all other associated parts. In addition remove kitchen units, sinks and white goods.	1	Item		
C	Remove all redundant heating systems; radiators, storage tanks, boilers and associated pipework, in accordance with M&E Outline Specification requirements (Appendix B) and dispose from site.	1	Item		
	Existing Internal Finishes				
D	Remove all joinery including staircases, skirting, architraves, doors/frames, balustrading, dado/picture rails and cupboards throughout property and dispose from site.	1	Item		
E	Hack off all plasterboard, plaster laths/cornices to **ALL** walls and ceilings throughout the property including to party wall, stud walls, ceilings, solid walls and structural stud work and dispose from site.	1	Item		
F	Carefully remove all external doors/frames, windows, window sills and reveals to entire property and dispose.	1	Item		
G	Remove fire place surrounds/hearths throughout the property and block up with blockwork leaving opening for ventilation covers only.	1	Item		
	Existing Floor Structures – Basement Level and Ground Floor				
H	Allow to remove existing timber joists and floor boarding to the ground floor areas (GF.01 to GF.23;) including over basement areas, including wall plates and dispose from site. NB: Contractor to allow for the use of clean properly compacted hardcore to bring any sub floor vented areas or other voids up to the level required.	1	Item		
I	To existing 4 no. basement voids allow to fill with (CLC) Cellular lightweight foam concrete bringing up to sub-strate ground level, prepared to receive proposed solid floor construction as specified hereafter. Allow a provisional quantity of 20m^3 per basement.	80	M^3		

		Qty	Unit	Rate	£ p
	DEMOLITION/STRIP OUT (Cont'd)				
	Existing Floor Structures – Basement Level and Ground Floor (Cont'd)				
A	To the existing 2 no. rear additions (GF07 to GF11 and GF24 to GF30) allow to excavate the existing solid floor and oversite to depth required for proposed solid floor construction as specified hereafter and as indicated on Drawing. No. B7341/C.1.05 (Detail A), Make good any disturbed surfaces affected by removal. Allow for new proposed extended floor areas to F1.06 and F2.06 as indicated on, Drawing No. B7341/C.1.03, grubbing out old brick footings to achieve the correct floor sub-strate.	1	item		
B	Further to excavation of existing solid floors, allow for the excavation of 9 no. trial holes as directed on SE Drawing no. 15605/01 to expose existing footings, as directed by the CA on site. **Refer to provisional sum for additional support works/underpinning to existing footings.**	1	Item		
	Existing Extensions				
	Front				
C	As indicated on Drawing. No. B7341/C.1.02 and SE Drawing no. 15605/01 allow to provide all necessary structural support and demolish in its entirety the existing front single storey brick constructed extension including roof structure, walls, windows, doors along with floor construction and dispose all from site.				
	Rear				
D	As indicated on Drawing No. B7341/C.1.02 and SE Drawing No. 15605/01 allow to provide all necessary structural support and demolish partial ground floor rear additions including bay window (flat 2 and flat 4) along with second floor rear additions (flat 11 and maisonette 1) including external/internal walls, windows/doors, floors construction and roof structures and dispose all from site.				

		Qty	Unit	Rate	£ p
	DEMOLITION/STRIP OUT (Cont'd)				
	Existing Walls				
	To areas indicated below as per drawing no. B7341/ C.1.02 allow to provide necessary support and demolish existing load/non-load bearing internal walls to front, rear and internally and make good existing surfaces as required. Dispose of debris on completion.				
A	**Ground Floor**				
	Flat 1				
i	Non load bearing walls dividing GF02 - GF05	5	Nr		
	Flat 2				
i	Load bearing wall dividing GF07 and GF11	2	Nr		
ii	Non load bearing walls dividing GF08 - GF11	54	Nr		
	Flat 3				
i	Load bearing walls to GF18 and GF06	2	Nr		
ii	Non load bearing walls dividing GF12 - GF17	8	Nr		
	Flat 4				
i	Non load bearing walls dividing GF24 - GF30	7	Nr		
	Flat 5				
i	Non load bearing walls dividing GF20 - GF23	5	Nr		
B	**First Floor**				
	Flat 6				
i	Non load bearing walls dividing FF01 - FF05	6	Nr		
ii	Compartment wall to communal area staircase (FF06)	1	Nr		
	Flat 7				
i)	Non load bearing walls dividing FF12 - FF17	5	Nr		
ii)	Compartment walls to communal area staircase	3	Nr		
	Flat 8				
i	Non load bearing walls dividing FF19 - FF25	9	Nr		
	Maisonette 1				
i	Load bearing wall between FF08-FF09	1	Nr		

		Qty	Unit	Rate	£ p
	DEMOLITION/STRIP OUT (Cont'd)				
	Existing Walls (Cont'd)				
A	**Second Floor**				
	Flat 9				
i	Non load bearing walls dividing SF01 - SF07	5	Nr		
ii	Compartment wall dividing SF06 and SF11	1	Nr		
	Flat 10				
i	Non load bearing walls dividing SF11 - SF16	3	Nr		
ii	Load bearing staircase walls - SF17	2	Nr		
	Flat 11				
i	Non load bearing walls dividing SF18 - SF23	7	Nr		
	Maisonette 1				
i	Non load bearing wall dividing SF08 and SF10	3	Nr		
ii	Load bearing wall dividing SF08 and SF09	1	Nr		
iii	Cupboard walls to SF09	2	Nr		
	Existing Staircases				
B	As indicated on drawing no. B7341/C1.02, allow to provide necessary support and remove **ALL** existing staircases leading from basement up to second floor including balustrading, strings, half landings, kites and winders etc and dispose from site.	1	Item		
	Existing Floor Boarding				
C	Strip out all floor boarding to entire property including de-nailing of existing floor joists ready to receive new coverings as specified later.	1	Item		
	New Openings				
	To cater for proposed layout, provide temporary support and form new openings to existing internal/external walls for new windows and doors ready to receive new beam/lintel support in accordance with SE details and drawing No. B7341/C.1.02. Openings as follows:				
D	**Ground Floor**				
	Flat 1 and 2				
i	Load bearing walls between GF05 and GF07 and GF06 and GF11	2	Nr		

		Qty	Unit	Rate	£ p
	DEMOLITION/STRIP OUT (Cont'd)				
	New Openings (Cont'd)				
A	**Ground Floor (Cont'd)**				
	Flat 4				
i	Load bearing internal walls between GF18 and GF24	1	Nr		
ii	Load bearing external wall to GF24	1	Nr		
ii	Form window to load bearing rear wall to GF26	1	Nr		
	Flat 5				
i	Load bearing internal wall between GF23 and GF25	1	Nr		
ii	Load bearing external wall to GF25	1	Nr		
iii	Load bearing front external wall to form entrance	1	Nr		
iv	Form window openings to GF25 rear walls	2	Nr		
v	Form window openings to existing side bay to GF20	2	Nr		
B	**First Floor**				
	Flat 6				
i	Load bearing internal wall between FF05 and FF07	1	Nr		
	Flat 8				
i	Load bearing internal wall between communal stairs and FF24	1	Nr		
ii	Load bearing external wall to FF24	1	Nr		
C	**Second Floor**				
	Flat 9				
i	External wall to SF07	1	Nr		
ii	Internal Load bearing wall between SF04 and SF12	1	Nr		
iii	External wall between SF05 and SF08	1	Nr		
	Flat 10				
	Load bearing wall between SF17 and SF13	1	Nr		

		Qty	Unit	Rate	£ p
	DEMOLITION/STRIP OUT (Cont'd)				
	External Strip				
	All Roofs (pitched and flat)				
A	To all roofs allow to strip existing coverings including battens, felting, tiling, lead flashings, soakers, central valley boarding/coverings, fascia/soffits and rainwater goods and dispose from site. As indicated on SE Drawing No. 15605/03 allow to support surrounding areas and strip existing fire damaged roof structure including rafters, collars, purlins, wall plates and ceiling joists and dispose from site. Arrange for an inspection with the CA and Thanet Council Building control to determine/agree the extent of stripping back of surrounding structural roof timbers affected by fire and/or wet/dry rot. Refer to Provisional Sums for roof works allowance.	1	Item		
	Elevations				
B	Chemically remove all paintwork to existing stucco/rendered window surrounds, sills, brickwork, stone detailing copings, etc to all elevations as per NBS clause C42 ready to repaint as specified later.	1	Item		
C	To stone-dashed surfaces; test for loose material, hack off back to sound, including areas previously poorly repaired or otherwise defective with lichen growth, ready to reinstate as specified later. Allow for 50m^2.	50	M^2		

		Qty	Unit	Rate	£ p
	GROUNDWORKS/OVERSITE REFER TO NBS CLAUSES - D20, E05, E10, E20, E40 and E41				
	Proposed Internal and External Load bearing wall foundations				
A	Excavate for and form new strip foundations to support proposed internal ground floor walls along with front and rear external walls as shown drawings 15605/01 and Details D1, D2, E and F on B7341/C.1.05, all in accordance with SE details. Foundations included to:	1	Item		
i	New front bay walls	3	Item		
ii	Proposed rear extension walls	5	Item		
iii	Staircase load bearing walls	2	Item		
iv	Internal party wall (dividing House 2 and Flat 1	1	Item		
v	Internal 140mm thick spine wall	2	Item		
vi	Rear extension dividing wall	1	Item		
	Proposed insulated slab				
B	In accordance with PRP drawing no. B7341/C.1.05 and SE Drawing No. 15605/01 construct new insulated slab to entire ground floor including to rear extensions by compacting sub-soil, laying 150 mm hardcore, 50 mm sand blinding, 1200g membrane, 150 mm RC slab with 1 no. layer of A142 mesh, 100 mm FF4000 Celotex insulation complete with screed as specified later.	1	Item		
C	Allow for forming concrete steps to Flat 1 and Flat 2 as specified later under proposed staircases.	1	Item		

		Qty	Unit	Rate	£ p
	STRUCTURAL/STEELWORK/BRICKWORK/ BLOCKWORK REFER TO NBS CLAUSES – F10 and F30				
	Existing load bearing walls.				
	Upon removal of load bearing walls, and preparation of existing brickwork/blockwork reveals to openings; supply and install 3 no. 100 x 140mm deep pre-stressed lintels as denoted L3 on SE drawings 15605/01-03 to the following walls:				
	Ground Floor				
A	Proposed House 1				
i	Opening between H1.01 and H1.05	1	Nr		
ii	Front entrance opening	1	Nr		
iii	3 no. new window openings to H1.05 (Kitchen)	3	Nr		
B	Proposed House 2				
i	Front entrance opening	1	Nr		
ii	Opening between H2.01 and H2.05	1	Nr		
iii	2 no. window openings to H2.05 (kitchen)	2	Nr		
C	Proposed Flat 1				
i	Opening between F1.02 and F1.06	1	Nr		
ii	Communal entrance door	1	Nr		
D	Proposed Flat 2				
i	Opening between F2.02 and F2.06	1	Nr		
ii	Communal entrance door	1	Nr		
	First Floor				
E	Proposed House 2				
i	Opening between H2.07 and rear extension	1	Nr		
ii	Window opening to H2.09 (shower room)	1	Nr		
F	Proposed Maisonette 1				
i	Window openings to M1.04	2	Nr		
G	Proposed Maisonette 2				
i	Opening between M2.06 and M2.02	1	Nr		

		Qty	Unit	Rate	£ p
	STRUCTURAL/STEELWORK/BRICKWORK/ BLOCKWORK Cont'd REFER TO NBS CLAUSES – F10 and F30				
	Existing load bearing walls Cont'd				
	Second Floor				
A	Proposed House 1				
i	External window opening H1.12	1	Nr		
B	Proposed Maisonette 1				
i	Proposed window opening M1.11	1	Nr		
C	Proposed Maisonette 2				
i	External window opening M2.11	1	Nr		
	Proposed External Walls				
	Rear Extension				
D	Upon completion of new foundations as specified earlier; construct new solid blockwork external walls to form new rear ground floor extensions, as indicated on drawing no. B7341/C.1.03 and section detail D1 on drawing no. B7341/C.1.05. Window/door openings to be formed within new walls supported by precast lintels as annotated L1 on SE drawing No. 15605/01.	1	Item		
E	To the rear elevation at ground floor level and side elevation on first floor construct new solid brickwork walls with existing opening as indicated on SE drawing No. 15605/01 and detail D2 on drawing no. B7341/C.1.05.	1	Item		
	Front Elevation				
F	Construct new solid brickwork external wall (thickness to match existing) to form new ground floor elevation along with 3 no new bays, as indicated on drawing no. B7341/ C.1.03, section detail D2 on B7341 C.1.05 and in accordance with SE Drawing no. 15605/01 and 05 (section 05/1-1). Bay brick arches to match existing and complete with reinforced concrete lintels as indicated on Section A-A SE Drawing. no, 15605/01.	1	Item		

		Qty	Unit	Rate	£ p
	STRUCTURAL/STEELWORK/BRICKWORK/ BLOCKWORK Cont'd REFER TO NBS CLAUSES – F10 and F30				
	Proposed Load Bearing Internal Walls				
	On new foundations as specified earlier; instruct new solid blockwork walls as per drawing no. 15605/01 including noted lintels (L2) to the following:	1	Item		
	Ground Floor				
A	Proposed House 1				
i	140mm thick 7N/mm² blockwork spine wall between H1.02 and H1.03	1	Nr		
ii	100mm thick 7N.mm² blockwork staircase wall.	1	Nr		
B	Proposed House 2				
i	140mm thick 7N/mm² blockwork spine wall between H2.02 and H2.03	1	Nr		
ii	100mm thick 7N.mm² blockwork staircase wall.	1	Nr		
iii	215mm thick 7N/mm² blockwork party wall between proposed house 2 and proposed flat 1. (B7341/C.1.05 Detail E).	1	Nr		
C	Proposed Flat 1 and 2				
i	215mm thick 7N/mm² blockwork party wall between flats 1 and 2. (B7341/C.1.05 Detail E).	1	Nr		
	First Floor				
D	Party Walls				
i	215mm thick 9N/mm² blockwork party walls between House 1 and 2; House 2 and maisonette 1; maisonette 1 and 2. (B7341/C.1.05 Detail E).	3	Nr		
	Existing Window Lintels				
E	Further to removal of plaster expose backing lintels to all existing window openings (as denoted LX on SE drawing. No. 15605/01-03)	1	Item		
	Refer to Provisional Sums for allowance to replace any defective window lintels detected on site.				
	Existing Openings				
F	As indicated on SE drawing. No. 15605/01-03 allow to infill existing internal door and window openings accordingly to match thickness of surrounding walls using brickwork or blockwork as per details D2 and E (B7341/C.1.05) ready to receive plastering as specified later.	11	Nr		

		Qty	Unit	Rate	£ p
	STRUCTURAL/STEELWORK/BRICKWORK/ BLOCKWORK Cont'd REFER TO NBS CLAUSES – F10 and F30				
	Restraint Straps				
A	To locations indicated on SE drawing nr. 15605/02-03 supply and fix new 30x5mm galvanised m.s straps at 1200 mm c/c's to existing external walls. Restraint straps set in 450 x 100 x 150 deep concrete inserts into existing external walls as per detail 06/A-B on SE drawing no. 15605/06. Include for plywood packing between wall and floor joists.	1	Item		
B	To abutment of internal and external walls indicated by SE drawing. Nr. 15605/02 supply and fix 30x5mm galvanised m.s restraint straps chased into brickwork @ 1200mm vertical c/c's each side of wall. Straps set in 300 x 100 x 150mm deep concrete as per detail 06/C on SE drawing. no. 15605/06.	1	Item		
C	At roof level supply and fix 30x5mm galvanised m.s. vertical wall plate restraint straps @ 1200 mm c/c's to location indicated by SE Drawing no. 15605/03 and as per detail 06/E on SE drawing. No. 15605/06.	1	Item		
	New Angle Binders				
D	Allow to expose bonding to brickwork and supply and fix new angle binders as per detail 06/H on SE drawing. No. 15605/06. Include for re-stitching cracked block/brickwork with new bricks and mortar.	11	Nr		
	New Steel Beams				
	As indicated on SE drawing no. 15605.02-03 allow to provide all necessary support and install the following steel beams as per section 06/3-3 and 07/01-1:				
E	First Floor Plan				
i	(B1) - 203 x 203 x 60 UC on (P1) 550 x 140 x 215dp MC padstones	2	Nr		
			Nr		
ii	(B2) 203 x 203 x 71 UC on 2 no. new 215 x 215mm Class B engineering brickwork piers.	2	Nr		
iii	(B3) - 152 x 152x 23 UC to support B1	1	Nr		
F	Second Floor Plan				
i	(B2) - 203 x 203 x 71 UC on (P1) 550 x 140 x 215dp MC padstones	2	Nr		
	Roof Plan				
i	(B4) - 203 x 203 x 52 UC on (P2) 550 x 215 x 215dp and (P3) - 440 x 140x 215dp MC padstones.	2	Nr		

		Qty	Unit	Rate	£ p
	STRUCTURAL CARPENTRY REFER TO NBS CLAUSES - G12 AND G20				
	Staircase openings - proposed				
A	Allow necessary support and form openings to upper ground floor joists and first floor joists to cater for new staircases (as specified under Carpentry/Joinery)	1	item		
B	To openings allow new double trimmers (2 x 50 x 200mm) to perimeters and bolt new joists to existing (sizes to match). Include for joist hangers, connections, bolts, noggins etc in accordance with SE Drawing no. 15605/02 and 03	1	item		
	Staircase Openings - Replacement				
C	For staircases which are to be renewed in current locations; allow for all necessary support, allow for the preparation of existing structural timber joists and trimmers for inspection by the CA/SE in order to agree the extent of any replacement sections; to cater for new staircases (as specified later under carpentry and joinery).	1	item		
	New Structural Flooring				
D	To proposed house 2 provide and install new 220 x 50mm timber floor joists @ 400mm c/c's at first floor and second floor level to entire property as indicated on SE drawing. No 15605/02 and 03 ready to receive new floor boards as specified later.	1	item		
	Floor Strengthening Works - Generally				
E	To all retained first and second floor joists; allow for replacement of defective floor joists as per detail 06/D on SE drawing no. 15605/06. Allow for 25 no. replacements as confirmed with CA on site.	25	Nr		
F	Allow for strengthening joists to first and second floors by bolting new joists to the side of every third joist in all rooms, as per detail 06/D on SE drawing no. 15605/06.	1	Item		
	Note: Refer to Provisional Sums for replacement of defective floor joists and strengthening floor				
	Infill Timber Floor				
G	Upon removal of staircase (ground floor to first floor GF06) allow to infill opening to form landing using 50x200mm C16 timbers @ 400mm c/c's ready to receive new floor boarding as specified later, as indicated.	1	Item		
	Timber Wall Trimmers				
H	As indicated on Section 06/1-2 and 06/2-2, SE Drawing. No. 15605/06 allow to support new timber walls with new timber blocking between joists.	1	Item		

		Qty	Unit	Rate	£ p
	INSULATION/FIRESTOPPING				
	External Walls - (Front/Rear/Flank)				
A	Further to removal of plaster finishes as previously specified, insulate all existing internal face of external walls with 67.5mm Kingspan K18, fixed to 25 x 47mm battens at 600mm c/c, complete with 12.5mm plasterboard as per details A, B, D1 and D2 on drawing no B7341/C.1.05. Upon installation of new windows/external doors allow to form suitable reveals detail using plasterboard.	1	Item		
	Fire Break Walls				
B	Within proposed roof space allow to construct 3 no. new fire break walls as indicated on SE drawing no. 15605/03. Walls constructed using 100 x 500 mm timber studwork built off existing party walls to underside of rafters. Complete with firewool insulation in between studs and lined with 2 layers of 15mm Fireline boarding either side.	1	Item		
	Roof Insulation				
C	Roof insulation (to pitched roof areas) to be provided using minimum 270mm mineral wool insulation installed in 2 No. layers between and over the existing and new rafters.	1	Item		
	Fire Protection to Structural Steelwork				
D	Allow for 2 No. layers of 15mm Fireline plasterboard with staggered joints and skim finish fixed to 25.25mm batten cradle to enclose ALL steelwork complete with Rockwool insulation filled within steel web.	1	Item		

		Qty	Unit	Rate	£ p
	ROOF WORKS REFER TO NBS CLAUSES - J10, J31, J41 and H61				
	Replacement of Defective Roof Timbers				
A	Upon removal of existing coverings and stripping out defective timbers identified by the CA/SE allow for replacement of existing defective timbers as per structural engineer's drawing 15605/03.				
i	Rafters 50 x 125mm	200	LM		
ii	Wall plates 75 x 125mm	50	LM		
iii	Ceiling joists 50 x 150mm	200	LM		
iv	Ridge board 195 x 38mm	10	LM		
	NB: The contractor may assume for pricing purposes that the roof structure generally covering House 2 will not be salvageable, and will therefore require complete renewal. It is anticipated that the roof structures over the remaining area will have survived to a reasonable extent, and it is this area that will require assessment by the CA/SE for any replacement timber sections.	1	Item		
B	Where wall plates are renewed allow for packing the top of the steel beams supporting the central drain from front to rear, introducing adequate falls.	1	Item		
	Loft Hatches				
C	Allow for cutting and trimming existing ceiling joists to form new 4 no. 562 x 665 mm loft hatch as indicated on drawing no. 15605/03. To new opening supply and install new loft hatch as per L20/360.	4	Item		
	Proposed Roof - House 2				
D	Further to removal of fire damaged roof structure and coverings allow to construct new pitched roof complete with 50x125mm rafters, 195x38mm ridge board, 50x100mm ceiling joists and 75x125mm wall plates all in accordance with SE drawing no. 15605/07 ready to receive new coverings as specified below.	1	Item		
	Roof Coverings				
E	To entire new/existing pitched roof lay new breathable membrane to rafters as per H61 followed by 25 x 50 mm S.W. treated battens and complete with Redland 49 concrete interlocking tile coverings. Roofing to include continuous eave ventilation and ridge ventilation, to provide cross ventilation to meet current regulations.	1	Item		

		Qty	Unit	Rate	£ p
	ROOF WORKS (Cont'd) REFER TO NBS CLAUSES - J10, J31, J41 and L20				
	Roof Coverings (Cont'd)				
A	To centre valley to main roof; incorporate new 22 mm lay boards laid on existing/new rafters to allow for support joists and fixings to width of property (1 stepped, stop end and raised kerb) with 4No. new internal running outlets. All new coverings, linings to be laid to falls draining to rear. New coverings to consist IKO Mach One system applied to new WPB lay boards and dressed under new pitched roof coverings and along each slope 500mm, into outlets and rear gutter outlet.	1	Item		
B	Allow for forming new outlets and linings compatible with gutter linings to form a durable and permanent seal.	1	Item		
C	To completed roof, supply and fix new code 4 lead flashings soakers to all upstands, including stepped into parapet walling and chimney stacks.	1	Item		
D	Allow to form roof access opening (650 x 650 mm). Include for trimming double rafters to form opening to roof and install new aluminium door, tray and frame as per L20/360.	4	Item		
	Rear Flat Roofs				
E	Further to reducing height of external walls to rear additions along with construction of two rear extensions allow to lay new precast concrete coping stones on to external perimeter walls. Construct 4 no. new flat roofs over all rear additions using new 220x50mm timber joists @ 400mm c/c's supported by galvanised joist hangers and 30x5mm galvanised m.s. straps as indicated on Section 06/4-4 on SE drawing no. 15605/06.	1	Item		
F	To new flat roof joists allow to install 22mm WBP plywood deck on firring pieces to provide adequate falls to 2nr. parapet outlets per roof. Complete with 126mm thick Celotex TD4000 insulation and 3 layer felt coverings, plus vapour barrier as per detail L on drawing no. B7341/C.1.05.	1	Item		
G	To new parapet outlets install new PVC hopper heads and downpipes and connect into existing drainage connectors. Include all connections and brackets etc.	4	item		
	Bay Roofs				
H	To each bay roof, allow to strip off existing coverings including timber decks and install new 22 mm WBP plywood deck on firring pieces to provide adequate falls, complete with 3 layers felt covering. Insulate roof with 100mm thick Celotex FF4000 insulation between joists and 50mm Celotex FF4000 under joists (as per detail K on B7341/C.1.05). At abutment allow for new horizontal Code 4 lead flashings, channel into existing brickwork.	1	Item		

		Qty	Unit	Rate	£ p
	ROOF WORKS (Cont'd) REFER TO NBS CLAUSES - J10, J31 AND J41				
	Bay Roofs (Cont'd)				
A	The contractor is to seek and provide the client with a 25 year insurance backed warranty/guarantee on all roofing work, which may involve the use of approved contractors/installers with appropriate qualifications and experience in the use of the products.	1	Item		
	Fascia and Soffits				
B	Further to removal, install new PVC fascia and soffits to entire property including bay windows and rear flat roof sections, as per clause H32.	1	Item		
	Rainwater Goods				
C	Further to removal, install new guttering and rainwater downpipes with new black PVC, to be connected into existing drainage connections, including all connections, brackets, outlets and stop-ends etc.	1	Item		

		Qty	Unit	Rate	£ p
	EXTERNAL WINDOWS AND DOORS REFER TO NBS CLAUSES - L10, L20 and P21				
	New Doors				
A	Entrance doors to flats 1 and 2 and maisonettes 1 and 2 shall be new 44mm thick hardwood door sets/frames complete with G/W vision panels and ironmongery, including deadlock, mortice lock, 1.5 pair of hinge bolts (2nr.), SS handles, letter box, numeral and draft strips.	4	Nr		
B	To front entrance doors of houses 1 and 2 and front communal entrance doors provide and fit new 44mm thick Malton style, dowelled hardwood door set/frame complete with Georgian wired vision panels and ironmongery, including deadlock, mortice lock, 1.5 pair of hinge bolts (2nr.), SS handles, letter box, numeral, weather bar and draft strips. **Note** borrowed light (opening fanlight with s/s security catch)also to be incorporated in one full height continuous frame section installed to front entrance door.	4	Nr		
C	To all side/rear exit doors; supply and install new 44mm thick Top G/W glazed hardwood door/frame sets complete with ironmongery. (deadlock, mortice lock, 1.5 pair of hinge bolts (2 nr), SS handles, numeral, weather bar and draft strips.	4	Nr		
	NOTE: All doors to be priced in accordance with door schedule (Appendix D). Also refer to NBS clauses L10, L20 and P21 along with drawing no. B7341/C.1.07	1	Item		

		Qty	Unit	Rate	£ p
	EXTERNAL WINDOWS AND DOORS (Cont'd) REFER TO NBS CLAUSES - L10, L20 and P21				
	NEW PVC WINDOWS				
	To newly prepared and remaining openings; supply and install new PVC double glazed windows to match fenestration as indicated on B7341/C1.06 and schedule C.1.07. Permanent ventilation in head, timber sills internally. All to fully comply with Building Regulations including for double glazed units, locks and sash restrictors. Obscure glass to bathroom and shower rooms.				
	Price each window separately as below:				
A	W01 – (1490mm high x 520mm wide)	16	Nr		
B	W02 – (1490mm high x 1000mm wide)	42	Nr		
C	W03 – (1100mm high x 1860mm wide)	40	Nr		
D	W04 – (1290mm high x 1000mm wide)	40	Nr		
E	W05 – (1100mm high x 872mm wide)	1	Nr		
F	W06 – (1477mm high x 828mm wide)	3	Nr		
G	W07 – (700mm high x 600mm wide)	2	Nr		
H	W08 – (1490mm high x 1200mm wide)	1	Nr		

		Qty	Unit	Rate	£ p
	DRY LINING/PLASTERING REFER TO NBS CLAUSES - K10, K20, K21, M10, M20 and J10				
	Internal Partitions				
	Load Bearing Stud Partitions				
	To areas noted below and as indicated on SE drawing no. 15605/02-03 and 06; construct new load bearing timber stud walls consisting 50 x 100 C16 studs @ 400mm c/c's as per detail G3 drawing no. B7341/C1.05 complete with Rookwool insulation, 12.5mm plasterboard (skim coat plaster specified later):	1	Item		
A	First Floor				
i	House 1 and 2 - Spine walls including L5 lintels	2	Nr		
ii	House 1 and 2 - Staircase walls	2	Nr		
iii	Maisonette 1 and 2 - Staircase walls	2	Nr		
B	Second Floor				
i	House 1 and 2 - Spine walls including L6 lintels	2	Nr		
ii	House 1 and 2 - Staircase walls	2	Nr		
iii	Maisonette 1 and 2 - Staircase walls	2	Nr		
	Non Load Bearing Stud Partitions				
	Construction new 50x100mm timber stud partitions, as detail c1 and c2 (drawing no. B7341/C.1.05) to create new internal layout to each floor, complete with Rockwool insulation, 12.5mm plasterboard (skim coat plaster specified later). Allow for additional nogging and ply sheet behind wash hand basins, WC suites and kitchen wall units. Price each wall individually:				
	Ground Floor				
C	House 1				
i	Hallway (H1.01) wall (x1no)	1	Nr		
ii	Staircase cupboard walls (x2no)	2	Nr		
iii	Kitchen (H1.05) cupboard walls (x2no)	2	Nr		
D	House 2				
i	Hallway (H2.01) wall	1	Nr		
ii	Staircase cupboard walls	2	Nr		
iii	Kitchen (H2.05) cupboard walls	2	Nr		
E	Flat 1				
i	Walls dividing bedrooms 1, bathroom, cupboard, bedroom 2 and hallway	6	Nr		

		Qty	Unit	Rate	£ p
	DRY LINING/PLASTERING (Cont'd) REFER TO NBS CLAUSES - K10, K20, K21, M10, M20 and J10				
	Non Load Bearing Stud Partitions (Cont'd)				
	Ground Floor (Cont'd)				
A	Flat 2				
i	Walls dividing bedroom, bathroom, cupboard, bedroom 2 and hallway	5	Nr		
	First Floor				
B	House 1				
i	Shower room, bathroom and hallway walls	2	Nr		
C	House 2				
i	Shower room, bathroom and hallway walls	2	Nr		
D	Maisonette 1				
i	Wall dividing living room and kitchen	1	Nr		
ii	Walls dividing shower room, hallway and bedroom	2	Nr		
E	Maisonette 2				
i	Wall dividing living room and kitchen	1	Nr		
ii	Walls dividing shower room, hallway and bedroom	2	Nr		
	Second Floor				
F	Maisonette 1				
i	Walls dividing bedroom, bathroom, cupboard and hallway	4	Nr		
G	Maisonette 2				
i	Walls dividing bedroom, bathroom, cupboard and hallway	4	Nr		

		Qty	Unit	Rate	£ p
	DRY LINING/PLASTERING (Cont'd) REFER TO NBS CLAUSES - K10, K20, K21, M10, M20 and J10				
	Compartment Walls				
A	Construct new 100x50mm timber stud partitions to create compartment/separating walls to provide acoustic and fire insulation between flats and communal areas as per detail H (drawing no. B7341 C.1.05). Complete with insulation and 2 no. 15mm Fireline plasterboard fixed to resilient bars (600mm c/c's) either side, (skim coat plaster as specified later), as per drawing B7466 B.01.03. Price each area individually as below:	1	Item		
	Ground Floor				
i	Wall dividing communal hallway and flat 1 and staircase wall	1	Nr		
i	Wall dividing communal hallway and flat 2 and staircase wall	1	Nr		
	Note: **To all bathroom/shower room walls allow to supply and fix full height 15mm SoundBloc (MR) plasterboard to new studwork as per detail C2. Include to door and window reveals.** **To all walls forming new kitchens allow to supply and fix new full height 15mm fireline (MR) boarding to new studwork as per detail C2. Include to door and window reveals.**				
	Ceilings				
	Suspended Ceilings				
B	To all areas indicated on drawing no. B7341/C.1.04 supply and install new Casoline MF suspended ceiling system or similar and approved, installed beneath existing and new proposed floor joists in strict accordance with the manufacturer's instructions. New grid system to be suspended beneath joists using Gypframe Acoustic hangers to give 277 mm minimum cavity. Two staggered layers of 15mm BG SoundBloc board fixed directly to grid system and insulated between joists with 100mm Isover Spacesaver Ready Cut as per detail I (B7341/B.C.1.05). Insulation to be dressed up all adjacent walls to underside of floor boards. All boarding complete with skim plaster as specified later. Price per room as outlined below:	1	Item		
	Ground Floor				
i	Flat 1 - All ceiling areas throughout.	1	Item		
ii	Communal Areas 1 and 2 (C.01 and C.02)	1	Item		
iii	Flat 2 - All ceiling areas throughout.	1	Item		

		Qty	Unit	Rate	£ p
	DRY LINING/PLASTERING (Cont'd) REFER TO NBS CLAUSES - K10, K20, K21, M10, M20 and J10				
	Ceilings (Cont'd)				
	Plasterboard Ceilings				
A	To remaining exposed ceilings supply and fix 1no layer of 12.5mm Gypsum plasterboard complete with skim plaster, see finish as per detail J on drawing no B7341/C.1.05. **Note: 15mm BG Soundbloc (MR) to be fitted to all bathrooms/shower room ceiling. 15mm BG fireline board to be fitted to all kitchens.**	1	Item		
	Plaster Finish				
	Existing/Proposed - Blockwork/Brickwork				
	Thoroughly prepare and key all new blockwork and existing brickwork internally and apply 2no. coats lightweight undercoat and finish Gypsum plaster as M20/210, overall thickness 13mm. Similarly, apply new plaster to all blocked up windows/door openings and leave all smooth ready for decorations. Price each area indicated below:	1	Item		
B	Ground Floor				
i	Party walls	1	Item		
ii	Internal existing brickwork walls	1	Item		
iii	Internal blockwork walls	1	Item		
C	First Floor				
i	Party Walls	1	Item		
ii	Internal existing brickwork walls	1	Item		
iii	Internal blockwork walls	1	Item		
D	Second Floor				
i	Party walls	1	Item		
ii	Internal existing brickwork walls	1	Item		
iii	Internal blockwork walls	1	Item		

		Qty	Unit	Rate	£ p
	DRY LINING/PLASTERING (Cont'd) REFER TO NBS CLAUSES - K10, K20, K21, M10, M20 and J10				
	New Plasterboard Skim Plaster To all new plasterboard finishes, scrim joints and apply 3 mm plaster finish ready for decorating. Price each area separately as below:				
A	Ground Floor				
i	External walls (internally)	1	Item		
ii	Internal stud partitions	1	Item		
iii	Ceilings	1	Item		
B	First Floor				
i	External walls (internally)	1	Item		
ii	Internal stud partitions	1	Item		
iii	Ceilings	1	Item		
C	Second Floor				
i	External walls (internally)	1	Item		
ii	Internal stud partitions	1	Item		
iii	Ceilings	1	Item		

		Qty	Unit	Rate	£ p
	CARPENTRY/JOINERY REFER TO NBS CLAUSE -K2				
	New Staircase				
	Install Wrought softwood standard staircase serving to all units and communal areas as shown on the proposed layout drawings B7341/C1.03. New staircases comprising 25mm thick treads with rounded nosings, 9mm thick plywood risers, 32mm strings, 22mm bullnose bottom MDF treads, 50x75mm hardwood handrails, 32mm square balustrades, half landings and 100mm square newel posts. Staircases to be designed in accordance with the current Building Regulations Part K - Private Stairs with minimum 220mm tread and maximum 220mm risers				
	Price individual staircases as per below:				
A	Houses 1 and 2				
i	Staircase 900mm wide from ground floor up to second floor including half landings, handrails, balustrades and newel posts.	1	Item		
ii	Steps 900mm wide formed with reinforced concrete floor slab (as per SE drawing no. 15605.01) leading from rear addition into main house complete with handrails.	1	Item		
B	Flats 1 and 2 and Maisonette 1 and 2				
i	Staircase 900mm wide from ground floor up to second floor including half landings, handrails, balustrades and newel posts.	1	Item		
ii	Steps 900mm wide formed with reinforced concrete floor slab as per SE drawing no. 15605.01) leading from rear addition into main house complete with handrails.	1	Item		
C	All new staircases to be lined to the underside with acoustic insulation comprising 15mm resilient bars fixed vertically followed by 50mm Isover mineral wool insulation complete with 2x15mm SoundBloc plasterboard, staggered joints and 3mm skim coating (as previously specified). **Note: Exposed staircase strings to be suitable depth to cater thickness of insulation lining.**	1	Item		

		Qty	Unit	Rate	£ p
	CARPENTRY/JOINERY (Cont'd) REFER TO NBS CLAUSE -K2				
	Proposed Flooring				
	New 22mm T&G Chipboard				
	Further to removal of existing floorboards as previously specified. Supply and lay new 22 mm T&G chipboard flooring throughout property excluding ground floor as per detail J on drawing no.B7341/C.1.05.				
	First Floor				
A	House 1				
i	H1.06 - Bedroom 1	1	Item		
ii	H1.07- Hallway	1	Item		
iii	H1.08 - Bedroom 2	1	Item		
iv	H1.09 - Shower Room	1	Item		
v	H1.10 - Bathroom	1	Item		
B	House 2				
i	H2.06 - Bedroom 1	1	Item		
ii	H2.07 - Hallway	1	Item		
iii	H2.08 - Bedroom 2	1	Item		
iv	H2.09 - Shower room	1	Item		
v	H2.10 - Bathroom	1	Item		
C	Maisonette 1				
i	M.1.02 - Hallway	1	Item		
ii	M.1.03 - Shower room	1	Item		
iii	M.1.04 - Bedroom 1	1	Item		
iv	M.1.05 - Living Room	1	Item		
v	M.1.06 - Hallway	1	Item		
vi	M.1.07 - Kitchen	1	Item		
D	Maisonette 2				
i	M.2.02 - Hallway	1	Item		
ii	M.2.03 - Shower room	1	Item		
iii	M.2.04 - Bedroom 1	1	Item		
iv	M.2.05 - Living Room	1	Item		
v	M.2.06 - Hallway	1	Item		
vi	M.1.07 - Kitchen	1	Item		
	Second Floor				
E	House 1				
i	H1.11 - Bedroom 3	1	Item		
ii	H1.12 - Hallway	1	Item		
iii	H1.13 - Bedroom 4	1	Item		

		Qty	Unit	Rate	£ p
	CARPENTRY/JOINERY (Cont'd) REFER TO NBS CLAUSE -K2 **Proposed Flooring – Cont'd**				
A	House 2				
i	H2.11 - Bedroom 3	1	Item		
ii	H2.12 - Hallway	1	Item		
iii	H2.13 - Bedroom 4	1	Item		
B	Maisonette 1				
i	M1.08 - Bathroom	1	Item		
ii	M1.09 - Bedroom 2	1	Item		
iii	M1.10 - Cupboard	1	Item		
iv	M1.11 - Hallway	1	Item		
v	M1.12 - Bedroom 3	1	Item		
C	Maisonette 2				
i	M2.08 - Bathroom	1	Item		
ii	M2.09 - Bedroom 2	1	Item		
iii	M2.10 - Cupboard	1	Item		
iv	M2.11 - Hallway	1	Item		
v	M2.12 - Bedroom 3				
	New Acoustic Flooring To areas indicated on drawing no. B7341/C.1.04 supply and lay new 26mm Cellecta Deckron 26T acoustic boarding on to chipboard as previously specified as per detail I on drawing no. B7341/ C.1.05 installed to manufacturer's recommendations. New acoustic flooring inclusive of resilient flanking perimeter strips.				
	First Floor				
D	Maisonette 1				
i	M1.02 - Hallway	1	Item		
ii	M1.03 - Shower room	1	Item		
iii	M1.04 - Bedroom 1	1	Item		
iv	M1.05 - Living room	1	Item		
v	M1.06 - Hallway	1	Item		
vi	M1.07 - Kitchen	1	Item		
E	Maisonette 2				
i	M2.02 - Hallway	1	Item		
ii	M2.03 - Shower room	1	Item		
iii	M2.04 - Bedroom 1	1	Item		
iv	M2.05 - Living room	1	Item		
v	M2.06 - Hallway	1	Item		
vi	M2.07 - Kitchen	1	Item		
	Staircase/landing Acoustic Matting				
F	On top new staircase and landing gap M1.01 and M2.01 and to landingM1.06 and M2.06 lay new Karndean 'Versilay' acoustic matting.	1	Item		

		Qty	Unit	Rate	£ p
	CARPENTRY/JOINERY (Cont'd) REFER TO NBS CLAUSE - K2				
	Kitchen and Bathroom Preparation				
A	To newly concrete rear extension floors supply and lay new latex screed ready to receive new vinyl coverings specified later.	1	Item		
B	To all new bathrooms and kitchens lay new 6mm plywood prior to laying new vinyl coverings.	1	Item		
	Door Linings				
C	To all existing/new internal door openings (50 nr.) supply and install new 32mm thick softwood linings x wall width, flush to plaster finish, complete with solid core doors as specified later. All kitchens and flat entrance doors to include intumescent strips to FD30 standard as specified below.	1	Item		
	Skirting				
D	Upon stripping out of all existing skirting's and further to plaster finish supply and fix new 150 x 18mm primed MDF skirting throughout the property.	1	Item		
	Architraves				
E	To all new/existing door opening supply and fix new 63 x 18mm primed MDF architraves, to be neatly mitred at corners.	1	Item		
	Door Stops				
F	Supply and fix new ex 38 x 12mm softwood stops to all new door linings, filled and finished ready for decorations.	50	nr		
	Unit Entrance Doors				
G	To all new external and communal doors, as a minimum, allow for the following ironmongery, as manufactured by HAFELE and as noted within door furniture schedule:	10	nr		
i	1.5 pair of 102mm fire resistant steel hinges product code 926.90203	10	nr		
ii	Intumescent/cold smoke seals	10	nr		
iii	Yale 81 Series Rollerbolt Nightlatch	10	nr		
iv	Security Chain	8	nr		
v	Door Viewer	8	nr		
vi	Door Numeral	8	nr		

		Qty	Unit	Rate	£ p
	CARPENTRY/JOINERY (Cont'd) REFER TO NBS CLAUSE -K2				
	Internal Doors				
A	To all internal openings supply and hang new FD20 44mm solid core doors, to include the following ironmongery. Door furniture as per schedule. Note, below including cupboard doors:	50	nr		
i	1.5 pairs of 102mm stainless steel hinges product code 926.90203	50	nr		
ii	Kitchen flat entrance doors strips intumescent / cold smoke seals	8	nr		
iii	Polished chrome latch handles 901.99.500	50	nr		
iv	Polished chrome bathroom/shower room latch handles 901.99.502	10	nr		
v	Bathroom/shower room and mortice lock with snib satin stainless steel 911.02.049	10	nr		
vi	Mortice latch satin SS 911.23.270	40	nr		

		Qty	Unit	Rate	£ p
	PLUMBING, MECHANICAL AND ELECTRICAL INSTALLATIONS Design, Install, test and commission the following plumbing, mechanical and electrical installations all in accordance with Chris Evans Consulting's M&E Services specification and design drawings included within Appendices; to each proposed dwelling;- Price each item below accordingly:				
A	Heating Installation complete	6	Item		
B	Gas Installation complete	6	Item		
C	Ventilation installations complete	6	Item		
D	Domestic Hot and Cold water installation complete	6	Item		
E	Sanitary installations complete	6	Item		
F	Electrical Installations complete	6	Item		
G	Telecommunications installations complete	6	Item		
H	Fire detection and alarm installations complete (including smoke, heat and carbon monoxide detectors)	6	Item		
I	Television Installations complete	6	Item		
J	Intercom door entry systems complete	6	Item		
K	Allow for providing all builder's work and installation, manufacturers and co-ordination drawings, calculations, "As Installed" and operating and maintenance drawings.	1	Item		
	Services' Ductwork				
L	Within bathrooms and adjacent rooms as required to conceal all services construct 75 x 50mm framing to duct casings, infill with 75mm thick mineral wool and line with 15mm Gypsum SoundBloc board including scrimming joints and applying 3mm setting coat of plaster.	1	Item		
M	Supply and install Timloc access panels type AP 150 and fixing to all ductwork where access to rodding eyes, pipe junction/joints is present.	1	Item		
N	Within ductwork where penetrating though individual properties supply and install fire collars and insulation to prevent spread of fire.	1	Item		
O	Allow for all other builder's work in connection with MEP, following installations, including cutting all holes, chases, mortices, sinkings and making good to a standard to receive decoration.	1	Item		

		Qty	Unit	Rate	£ p
	FINISHES REFER TO NBS CLAUSES - M60, N11, N13, P21, P10, P12, Z12, Z20, Z21 and Z22				
	Decorations				
	Note: Carry out the following decorations to EACH of the dwelling areas as listed below (i.e. paint to walls/ceiling/wood units/metal units to be priced on an individual basis):				
	Ceilings				
	To all newly plastered finishes apply mist and two full coats of matt white emulsion (silk to kitchens/bathrooms) to all new ceilings.				
	Walls and Partitions				
	To all newly plastered walls/partitions apply mist and two full coats of matt magnolia emulsion (silk to kitchens/bathrooms).				
	Woodwork				
	To all new/existing woodwork including door lining, window boards, doors, skirtings, staircase balustrading and architraves knot, stop, prime and apply 2no. undercoat and 1no. full gloss of oil paint as M60.				
	Metal Work				
	Prime all new metal surfaces and apply 2no. undercoats and 1no. full gloss coat of oil paint as M60.				
A	Ground Floor				
i	House 1	1	Item		
ii	House 2	1	Item		
iii	Flat 1	1	Item		
iv	Flat 2	1	Item		
v	Maisonette 1	1	Item		
vi	Maisonette 2	1	Item		
B	First Floor				
i	House 1	1	Item		
ii	House 2	1	Item		
iii	Maisonette 1	1	Item		
iv	Maisonette 2	1	Item		
C	Second Floor				
i	House 1	1	Item		
ii	House 2	1	Item		
iii	Maisonette 1	1	Item		
iv	Maisonette 2	1	Item		

		Qty	Unit	Rate	£ p
	FINISHES (Cont'd) REFER TO NBS CLAUSES - M60, N11, N13, P21, P10, P12, Z12, Z20, Z21 and Z22 **Floor Coverings** Thoroughly prepare new floor screed and apply sufficient layers of latex and/or plywood sheets as previously specified and supply and lay new slip-resistant floor coverings as M50/130. Price each room individually as per below:				
A	Ground Floor				
i	House 1 -Kitchen	1	Item		
ii	House 2 -Kitchen	1	Item		
iii	Flat 1 -Kitchen/Diner	1	Item		
iv	Flat 1 -Kitchen/Diner	1	Item		
v	Flat 2 - Kitchen/Diner	1	Item		
vi	Flat 1 Bathroom	1	Item		
vii	Flat 2 Bathroom	1	Item		
viii	Communal Areas (x2no)	1	Item		
B	First Floor				
i	Maisonette 1 - Kitchen	1	Item		
ii	Maisonette 2 - Kitchen	1	Item		
iii	Maisonette 1 - Shower room	1	Item		
iv	Maisonette 2 - Shower room	1	Item		
v	House 1 - Shower room and bathroom	1	Item		
vi	House 2 - Shower room and bathroom	1	Item		
C	Second Floor				
i	Maisonette 1 - Bathroom	1	Item		
ii	Maisonette 2 - Bathroom	1	Item		
	New Bathroom Installations (6 Nr)				
D	Supply and install baths, washbasins, and WC suites obtained from Armitage Shanks or similar and approved, including traps and taps and shower hose connection with wall mount; white toilet seat. Include isolation to all sanitaryware for future maintenance. All as shown to locations drawing no. B7341/C.1.03.	6	Nr		
E	Connection to all new sanitaryware to include supply and installation of new 100mm dia. Black PVC waste pipework to be fixed externally down to existing waste outlet to leave in full working condition.	1	Item		
F	New basins complete with overflow, pair of plated taps, slotted waste with plastic plug, chain waste and plug, 75mm seal bottle trap and pedestal.	6	Nr		
G	Baths to be 1700x700mm white heavy gauge steel rectangular baths with chrome plated grips, mixer shower taps with shower head, bath chain waste, plastic plug and overflow, 75mm seal trap. Complete with curtain/pole.	6	Nr		

		Qty	Unit	Rate	£ p
	FINISHES (Cont'd) REFER TO NBS CLAUSES - M60, N11, N13, P21, P10, P12, Z12, Z20, Z21 and Z22				
	New Bathroom Installations (6 Nr) (Cont'd)				
A	Low level WC suite comprising white vitreous wc pan with trap, 4/6 litre capacity cistern with cover, plastic siphon, ball valve assembly, connector and toilet seat.	6	nr		
B	Pre-finished hardboard front and end bath panels; to be easily removable for access to taps and waste, fitted to timber framework to suit opening.	6	nr		
C	Include white mastic sealant to perimeter of all sanitaryware, tiling and shower trays etc.	1	Item		
	New Shower Room Installations (4 nr)				
D	Provide WC suite (low level cistern), white toilet seat; provide valve for maintenance of cistern. (as per previous specification above)	4	nr		
E	New basin complete with overflow, pair of plated taps, slotted waste with plastic plug, chain waste and plug, 75mm seal bottle trap and pedestal.	4	nr		
F	Provide quadrant cubicle inclusive of enclosure door, tray, plinths, adjustable feet, surface mounted mixer valve, hose to shower rose, as manufactured by Armitage Shanks or similar and approved.	4	nr		
	New Kitchen Installations				
	Supply and install new kitchen fittings, joints, doors, end panels, plinths and worktops as manufactured by Howdens Greenwich range or similar and approved, to make best use of floor and wall space available, to suit kitchen and kitchen/diner layouts indicated on drawing no B7341 1.03/4. Contractor to submit final design for approval of the CA/Client selected from standard modular units.				
	Price each element below individually as supplied and fitted: (Not Carried to summary)				
G	House 1				
i	Wall Unit 400 x 300 x 720mm	1	Item		
ii	Wall unit 600 x 300 x 720mm	1	Item		
iii	Wall unit 1000 x 300 x 720mm	2	Item		
iv	Base unit 300 x 600 x 870mm	1	Item		
v	Base unit 600 x 600 x 870mm	5	Item		
vi	Base unit 1000 x 600 x 870mm	2	Item		
vii	Sink unit 1000 x 600 x 870mm	1	Item		

		Qty	Unit	Rate	£ p
	FINISHES (Cont'd) REFER TO NBS CLAUSES - M60, N11, N13, P21, P10, P12, Z12, Z20, Z21 and Z22				
	New Kitchen Installations (Cont'd)				
A	House 2				
i	Wall Unit 400 x 300 x 720mm	1	Item		
ii	Wall unit 600 x 300 x 720mm	1	Item		
iii	Wall unit 1000 x 300 x 720mm	2	Item		
iv	Base unit 300 x 600 x 870mm	1	Item		
v	Base unit 600 x 600 x 870mm	5	Item		
vi	Base unit 1000 x 600 x 870mm	2	Item		
vii	Sink unit 1000 x 600 x 870mm	1	Item		
B	Flat 1				
i	Wall unit 1000 x 300 x 720mm	2	Item		
ii	Base unit 300 x 600 x 870mm	2	Item		
iii	Base unit 600 x 600 x 870mm	1	Item		
iv	Base unit 1000 x 600 x 870mm	1	Item		
v	Sink unit 1000 x 600 x 870mm	1	Item		
C	Flat 2				
i	Wall unit 1000 x 300 x 720mm	1	Item		
ii	Wall unit 400 x 300 x 720mm	1	Item		
iii	Base unit 300 x 600 x 870mm	2	Item		
iv	Base unit 600 x 600 x 870mm	2	Item		
v	Base unit 1000 x 600 x 870mm	2	Item		
vi	Base unit 500 x 600 x 870mm	1	Item		
vii	Base unit 300 x 600 x 870mm	2	Item		
D	Maisonette 1				
i	Wall unit 1000 x 300 x 720mm	2	Item		
ii	Wall unit 500 x 300 x 720mm	2	Item		
iii	Base unit 600 x 600 x 870mm	4	Item		
iv	Base unit 1000 x 600 x 870mm	1	Item		
v	Sink unit 1000 x 600 x 870mm	1	Item		
E	Maisonette 2				
i	Wall unit 1000 x 300 x 720mm	1	Item		
ii	Wall unit 400 x 300 x 720mm	2	Item		
iii	Base unit 600 x 600 x 870mm	3	Item		
iv	Base unit 1000 x 600 x 870mm	1	Item		
v	Sink unit 1000 x 600 x 870mm	1	Item		
F	Worktops	42	LM		
G	Provide sink with inset stainless steel single bowl and drainer; separate chrome pillar taps, washing machine taps and waste connection under with access to washing machine space. Washing machine taps to be metal capped.	6	nr		

		Qty	Unit	Rate	£ p
	FINISHES (Cont'd) REFER TO NBS CLAUSES - M60, N11, N13, P21, P10, P12, Z12, Z20, Z21 and Z22				
	Wall Tiling				
	Prepare walls and install new 152 x 152mm ceramic wall tiling to all rooms listed below. Tiling to include beading and mastic silicone where required and installed as follows:				
	Splash backs above all kitchen worktops to be fully tiled to the underside of the overhead cupboards above worktops. (450mm). Also down to skirting level behind cookers.				
	450mm high above wash hand basin, full height around bath and/or shower area. Tiling to be carried into window reveals and cills. Shower room to be fully tiled. All horizontal duct tops shall be tiled.				
A	Ground Floor				
i	House 1 -Kitchen	1	Item		
ii	House 2 -Kitchen	1	Item		
iii	Flat 1 -Kitchen/Diner	1	Item		
iv	Flat 2 -Kitchen/Diner	1	Item		
v	Flat 1 - Bathroom	1	Item		
vi	Flat 2 - Bathroom	1	Item		
B	First Floor				
i	Maisonette 1 - Kitchen	1	Item		
ii	Maisonette 2 - Kitchen	1	Item		
iii	Maisonette 1 - Shower room	1	Item		
iv	Maisonette 2 - Shower room	1	Item		
v	House 1 - Shower room and bathroom	1	Item		
vi	House 2 - Shower room and bathroom	1	Item		
C	Second Floor				
i	Maisonette 1 - Bathroom	1	Item		
ii	Maisonette 2 - bathroom	1	Item		

		Qty	Unit	Rate	£ p
	EXTERNAL WORKS REFER TO NBS CLAUSES - R10, R11 and R12				
	Steps				
A	Form reinforced concrete steps to each front entrance door on Sweyn Rd to suit threshold levels and new entrance footpaths as shown on B7341/ C.1.103. Allow provisionally for 2 steps to each.	4	nr		
	New Boundary Walls				
B	To front perimeter of the property allow to demolish existing boundary walls including existing footings and cart away from site.	1	Item		
C	As indicated on drawing no. B7341 C.1.03 allow to excavate for and lay new 450 x 450mm mass concrete footings and construct new 1m high 215mm thick brick wall complete with 440 x 440mm brick pillars as shown on B7341 C.1.03. Pillars complete with prefabricated concrete coping stones.	1	Item		
	Drainage				
	Yard Gullies				
D	To proposed rear yard areas excavate for and install 4 no. new yard gullies to centre of each area. Connect to gullies in new 100mm drainage pipe and connected into drainage as identified on site.	1	Item		
	Bathroom/Kitchen Waste Connections				
E	As indicated on drawing no. B7341/C.1.03 allow to supply and install new drainage system to connect new bathroom and kitchen services to existing drainage run to rear of site. New installation to include 6no new 110mm soil vent pipes to front and rear of property connected into 5no. new plastic inspection chambers via new 110mm plastic wastepipes laid on sand/cement bed to required falls into existing drainage run. Include for all necessary excavation works and making good on completion	1	Item		
F	New 38mm diameter pipework to be connected to kitchen waste and run into 4no. new back inlet gullies to rear additions and connected into new inspection chambers as previously specified above.	1	Item		
G	Allow for 110mm waste pipe laid beneath new floor slab to Flat 1 kitchen in order to connect kitchen waste into inspection chamber.	1	Item		
	Note: Refer to Provisional Sum for unforeseen Drainage works allowance				

		Qty	Unit	Rate	£ p
	EXTERNAL WORKS Cont'd REFER TO NBS CLAUSES - R10, R11 and R12				
	Paving Slabs				
A	Upon completion of drainage set out, excavate for and supply and lay new 450 x 450mm concrete paving slabs Marshall's Saxon including root barrier to be laid on 100mm compacted hardcore and 50mm sharp sand to rear yard areas and front footpaths as shown B7341/C.1.03. Ensure fall created into new yard gullies as previously specified.	1	Item		
	Fencing				
B	Divide rear gardens and rear access pathway by supply and installing new fencing comprising treated softwood close board fencing complete with 76 x 38mm softwood rails, 89 x 11mm softwood poles lapped 13mm, concrete gravel boards and concrete posts 600m longer than panel at maximum 2.4m centres, set in concrete pads. Fencing to be 1.8 metres high. To positions as shown on B7341/C.1.03	1	Item		
C	Form new bin store areas to rear of property using new 1.8 m high close boarded pre treated timber fencing complete with concrete posts set within new concrete pad foundations and concrete gravel boards. Fencing to be complete with new 2 No. 1.8m high timber gates and ironmongery etc.	6	Nr		
	Existing Rear Boundary Walls				
D	Power wash all remaining boundary walling (to rear) as necessary to remove vegetation growth and wire brush to remove any lichen and paint to leave ready for new decorations.	40	m²		
E	Further to removal of existing paint to existing external and boundary walls allow to rake out and repoint joints of existing brickwork to match existing. Allow 20m2.	1	Item		
F	Apply one coat of stabilising solution coat and 2 no. finishing coats of exterior masonry paint to match main buildings.	40	m²		
	Render Works				
G	Further to removing loose render and stone dashed surfaces on existing external walls; re-render with cement and sand (1:3) two coat plain face rendering including dubbing out as necessary and using a compatible size of aggregate to achieve a matching appearance. Allow 50m².	50	m²		

		Qty	Unit	Rate	£ p
	EXTERNAL WORKS (Cont'd) REFER TO NBS CLAUSES - R10, R11 and R12				
	External Decorations				
A	Prepare and apply sealer coat and 2 no. coats of masonry paint to all existing and new rendered surfaces to entire property including to front bays, concrete cills, coping stones, boundary walls and ornate detailing. Refer to client or CA for directions on the colour of the stone dashed areas and stucco bay window surrounds.	1	Item		
	CCTV Survey				
B	Allow to undertake a CCTV survey and report of all internal/external drainage systems including jetting, clearing of all pipe runs, inspection chambers and interceptors as necessary to leave all drainage services in full working order.	1	Item		

		Qty	Unit	Rate	£ p
	PROVISIONAL SUMS				
A	Include for the following Defined Provisional Sums to be expended as directed by the Contract Administrator:				
B	Drainage connections/ rectification works				**6,000.00**
C	Replace defective window lintels with new pre-cast concrete lintels.				**4,000.00**
D	Replacement of defective floor joists				**4,000.00**
E	Bresummer beam rectification works				**6,000.00**
F	Asbestos test and removal.				**6,000.00**
G	Flue remedial works.				**1,000.00**
H	Building control fees.			As Fee	**2,500.00**
I	Sound testing.				**2,000.00**
J	Cycle Rack x 4 no.				**4,000.00**
K	Connections to water main.				**12,000.00**
L	Connections to gas main.				**12,000.00**
M	Connections to electrical main.				**12,000.00**
N	Connections to telephone main.				**2,000.00**
O	Timber treatment.				**4,000.00**
P	Additional Structural Works				**6,000.00**
Q	Repairs to chimney stacks and parapets.				**2,500.00**
R	Repairs to ornamental render work to external walls.				**3,000.00**
S	Repairs to external walls (crack repairs).				**3,000.00**
T	Structural works to existing footings.				**5,000.00**
U	Rotary washing lines (x 4no.)				**1,500.00**
V	Damp proof works				**10,000.00**
W	Additional external works.				**8,000.00**
X	Include the sum in the total column your Overheads & Profit % on Provisional sums .....%				
y	Employer's contingency sum.				**35,000.00**

		Qty	Unit	Rate	£ p
	SCHEDULE OF WORKS **COLLECTION** Page 3/1 Page 3/2 Page 3/3 Page 3/4 Page 3/5 Page 3/6 Page 3/7 Page 3/8 Page 3/9 Page 3/10 Page 3/11 Page 3/12 Page 3/13 Page 3/14 Page 3/15 Page 3/16 Page 3/17 Page 3/18 Page 3/19 Page 3/20 Page 3/21 Page 3/22 Page 3/23 Page 3/24 Page 3/25 Page 3/26 Page 3/27 Page 3/28 Page 3/29 Page 3/30 Page 3/31 Page 3/32 Page 3/33 Page 3/34 Page 3/35 Page 3/36 Page 3/37 Page 3/38 Page 3/39 Page 3/40 Page 3/41				
	Total To Main Summary £				

BILL NR 4

MAIN SUMMARY

£

MAIN SUMMARY

BILL NR 1 - PRELIMINARIES	£
BILL NR 2 – MATERIALS AND WORKMANSHIP	£
BILL NR 3 – SCHEDULE OF WORKS	£
TOTAL £	