



SPECIFICATION OF WORKS
SINGLE STOREY REAR EXTENSION WORKS

UB3 2DP

LONDON BOROUGH OF HILLINGDON
ADAPTATION WORK

(180411)

DUE TO CORONA VIRUS (COVID-19) THERE WILL BE NO SITE INSPECTION.

(Please refer to the drawing)

AGREED WORK START DATE MAY CHANGED

**LONDON BOROUGH OF HILLINGDON
PRIVATE SECTOR HOUSING**



FORM OF TENDER

Tender for a single storey rear extension.

At Hesa Road

I/We, the undersigned, having read the Specification, having examined the drawing(s) and having knowledge of the site, hereby offer to execute and complete the Works for the Sum of:

£.....**£25,150**.....(in figures)

TWENTY THOUSANDS AND ONE HUNDERD AND FIFTY POUNDS.....(in words)

I/We declare this tender to be submitted in accordance with the principles of bona fide competitive tendering. I/We have executed the Bona Fide Tender Certificate which forms part of this tender.

I/We agree that this tender, together with the written acceptance thereof, will constitute a binding contract.

I/We agree that this tender remain open for consideration for (1) week from the date for submission.

I/We understand that the Council is not bound to accept the lowest or any tender nor to defray any expenses in connection therewith.

I/We agree that in consideration of receiving payment in full prior to Audit Examination by the London Borough of Hillingdon's Director of Finance I/We agree to adjustment, by addition or deduction of any amount which may have been paid to me/us by way of accidental inclusion of any work, materials, goods or figure in any computation or arithmetical error in any computation.

Dated this _____ day of _____ 2020

Signed:

for and on behalf of:

Atelier Design & Build

General Contractors

Impresa angloitaliana

VAT 03576990836

D-U-N-S® 440360652

ITA tel. (+39) 351 8486944

UK tel. (+44)747 9846162

UKsos (+44) 7568253526

www.atelierdesignandbuild.co.uk

theatelierdesignandbuild@gmail.com

theatelierdesignandbuild@pec.ilcontabile.com

Registered Address: 15 Beech Gardens, W5 4AJ, London UK



HILLINGDON
LONDON

A PRELIMINARIES

<p>A PRELIMINARIES:</p> <p>1.1 PROJECT:</p> <p>Single storey rear extension to the back elevation of the property, as facing within confines of boundary.</p> <p>Works shall be carried out in occupation and should be completed within the timescale agreed in the JCT MW 2016 which will be Signed by both the Employer and the Contractor Prior to the commencement of works.</p> <p>1.2 EMPLOYER:</p> <p>London Borough of Hillingdon</p> <p>1.3 CONTRACT ADMINISTRATOR:</p> <p>Mr Henry Ogunn Telephone: 01895 556108</p> <p>LONDON BOROUGH OF HILLINGDON. Private Sector Housing, 4W/09 Civic Centre, High Street, Uxbridge, Middlesex.</p> <p>1.4 OCCUPATIONAL THERAPIST:</p> <p>Home Independence Service Dorset House, Kingston road, KT22 7PL Tel. 08456 800 787 ???????</p> <p>1.5 LEAD CONSULTANT:</p> <p>Henry Ogunn</p> <p>1.6 PROJECT DRAWINGS:</p> <p>Dwg. 2720/003/LBH/01 -Existing Ground Floor Plan Dwg. 2720/003/LBH/02- Proposed Ground Floor Plan Dwg. 2720/003/LBH/05- Existing Elevations Dwg. 2720/003/LBH/06 - Proposed Elevations</p> <p>1.7 CDM REGULATIONS 2015</p> <p>Principal Designer</p> <p>London Borough of Hillingdon Pre Contract Health & Safety Plan is to be provided. Principal Contractor and all contractors should follow the Guidelines as set out in this plan to develop their Construction Phase plan.</p>	<p>950</p> <p>900</p>	
---	-----------------------	--

See separate Pre Contract H & S Plan.

2.0 THE CONTRACT:

2.1 Contract Form applicable to these work will be:
Joint Council Tribunal [JCT] Minor Works Building Contract 2016

2.2 Recitals:

First: The works - Construction of a single storey extension to rear of property and disabled adaptation works.

Second: *Contractor's design element to be agreed during work stage*

Third: Refer to Section A. Preliminaries Item 1.6
Specification/Schedule of Works Priced Documents -
See Tender Specifications

Dwg. 2720/003/LBH/01 -Existing Ground Floor Plan
Dwg. 2720/003/LBH/02- Proposed Ground Floor Plan
Dwg. 2720/003/LBH/05- Existing Elevations
Dwg. 2720/003/LBH/06 - Proposed Elevations

500

Seventh Collaborative working - Applicable
Health and Safety - Applicable
Cost savings and value improvement - Applicable
Sustainable development and environmental considerations - Applicable
Performance Indicators and monitoring - Applicable
Notification and negotiation of disputes - Applicable

THE ARTICLES

Article 1 - Contractors Obligations

Article 2 - Contract Sum: This Article will be complete with the tender sum contained in the Contractor's Form of Tender

Article 3
CONTRACT ADMINISTRATOR is **Henry Ogunn** (LBH)

Article 4 and 5
PRINCIPAL DESIGNER / PRINCIPAL CONTRACTOR

Sixth As Amendment 1 - 2016
Seven Not Applicable

Fourth Recital and Schedule 2 (Paragraphs 1.1, 1.2, 1.5, 1.6, 2.1 and 2.2) - Base Date will be 7 days before tender submission.

<p>2.4 Contract Particulars:</p> <p>Clause 1.1 Health & Safety (CDM) Planning period Shall mean the period of 2 weeks ending on the date of possession.</p> <p>Clause 2.3 Commencement of the Works to be within 2 weeks of an instruction to proceed. Actual date to be confirmed.</p> <p>Clause 2.3 Contract Period / Duration - 12 Weeks</p> <p>Clause 2.9 Liquidated & Ascertained Damages: At the Rate of £200 per calendar week.</p> <p>Clause 2.11 Rectification Period - 12 Months from the date of Practical Completion.</p> <p>Clause 4.3 Interim Payment 28 days from valuation date (as amendments) Percentage of total value is to be certified before practical completion - 95% Percentage of total amount is to be certified on and after practical completion 97.5% No fluctuations apply.</p> <p>Clause 4.8.1 Supply of Documentation for computation of amount to be finally certified. To be Issued at Practical Completion.</p> <p>Clause 5.3.2 CONTRACTOR'S INSURANCE - INJURY TO PERSONS OR PROPERTY. Insurance cover (for any one occurrence or series of occurrences arising out of one event): Not less than £5,000,000.</p> <p>Clause 7.2 Adjudication is The President or Vice President of The Royal Institution of Chartered Surveyors. Schedule 1 - Arbitration is President or Vice President of The Royal Institution of Chartered Surveyors</p> <p style="color: red;">PD contract details</p> <p>Clause 5.4A1/5.4B/5.4C insurance either 5.4A, 5.4B and 5.4C</p> <p>1.2 Percentage to cover Professional Fees is 15%</p> <p>3.0 MANAGEMENT OF THE WORKS:</p> <p>3.1 Contractors Programme of Work:</p> <p>Upon request from the CA, the Contractor shall prepare Programme of Work in respect of the works to be performed in pursuance of this Agreement and he shall submit Programme to the CA for his approval</p>		
--	--	--

before commencing any part of the work.

The land to build is next to the property which is occupied. The Contractor shall have regard to the fact that the premises are occupied and shall use his best endeavours to ensure that his Programme of Work enables the work to be carried out with the minimum disruption and inconvenience to the occupant(s).

3.2 Sequencing of the Works:

The order of carrying out the Works shall take full account of the need to ensure that support is maintained at all times to any adjoining buildings.

3.3 Contract Administrator's Instructions / Variations:

CA may, without invalidating the Contract / LBH Financial Approvals / Standing Orders, instruct an addition to or omission from or other change in the Works or the order or period in which they are to be carried out and any such instructions shall be valued by the CA.

Provisional / Prime Cost Sums to be omitted, in part or deleted in whole at the sole discretion of the CA.

3.4 Contractor's Representative:

The contractor shall at all reasonable times keep upon the works a competent person in charge and any instructions given to him by the CA shall be deemed to have been issued to the Contractor.

3.5 Sub-Contracting:

The Contractor shall not subcontract the works or any part thereof without the prior written consent of the CA which consent shall not unreasonably be withheld.

3.6 Indemnity:

The Contractor shall be liable for and shall indemnify the Employer against.

- (A) Any liability, loss, claim or proceedings whatsoever arising under any statute or at common law in respect of personal injury to or the death of any person whomsoever arising out of or in the course of or caused by the carrying out of the works unless due to any act or neglect of the Employer, or any person for whom the Employer is responsible.
- (B) Any expense, liability, loss, claims or proceedings in respect of any damage whatsoever to any works or person in as far as such damage raised out of or in the course of or by reason of the carrying out of the works and is due to any negligence, omission or default of the Contractor or any person for whom the Contractor is responsible or of any subcontractor or person for whom the subcontractor is responsible.

3.7 Insurance:

Without prejudice to his liability to indemnify the Employer the Contractor

shall maintain and shall cause any sub-contractor engaged by him to maintain such insurances as are necessary to cover the liability of the Contractor, in accordance with the minimum levels as stated below:

Public / Products Liability	£ 5,000,000
Employer's Liability	£10,000,000

Documentary evidence: Before starting work on site Contractor/ Sub contractor submit details, and/ or policies and receipts for the insurances required by the Conditions of Contract to be in force at all material times.

4.0 VALUE ADDED TAX [VAT]:

In this Condition, 'VAT' means the Value added tax introduced by the Finance Act 1972 under the care and management of the Commissioners of Customs and Excise (hereinafter called 'The Commissioners')

The sum of sums due to the Contractor under this Agreement shall be regarded as exclusive of any VAT, and the Employer shall pay to the Contractor any VAT properly chargeable by the Commissioners on the Contractor on the supply to the Employer of any goods and services by the Contractor under this Contractor in the manner hereafter set out.

CA / client inform the Contractor of the amount certified for any interim payment and immediately the Contractor shall give the CA written provisional assessment of the respective values of those supplies of goods and services for which the certificate is being issued and which will be chargeable at the relevant time of supply on the Contractor at any rate of VAT (including zero). The Contractor shall also specify the rate or rates of VAT which are chargeable on those supplies.

Upon receipt of the Contractor's written provisional assessment the CA shall calculate the amount of VAT due by applying the rate or rates of VAT specified by the Contractor to the amount of the supplies included in his assessment, and shall remit the calculated amount of such VAT tot the Contractor when making payment to him of the amount of the interim payment certificate by the CA.

After the issue by the CA of his certificate of making good defects the Contractor shall prepare and submit to the CA a written final statement of the value of all supplies of goods and services for which certificates have

been or will be issued which are rechargeable on the Contractor at any rate or rates of VAT (including zero).

The Contractor shall also specify the rate or rates of VAT that are chargeable on works to be completed. He shall also state the total amount of VAT already received.

Upon receipt of the written final statement CA shall calculate the amount of VAT due by applying the rate or rates of VAT specified by the Contractor to the value of the supplies included in the statement and deducting thereof the total amount of VAT already received by the Contractor and shall pay the balance of such VAT to the Contractor within twenty-eight days from receipt of the statement.

If the CA finds that the total amount of VAT specified in the final statement as already paid exceeds the amount of VAT calculated under paragraph (b) of this sub-clause, CA shall notify the Contractor, who shall refund such excess to the Employer within twenty-eight days of receipt of the notification together with a receipt showing a correction of the amounts for which a receipt or receipts have previously been issued by the Contractor.

Upon receipt of any VAT properly paid under provisions of this Clause the Contractor shall issue to them an authenticated receipt.

In calculating the amount of VAT to be paid to the Contractor the CA shall disregard any sums which the Contractor may be liable to pay the Employer as liquidated damages.

The Contractor shall likewise disregard such liquidated damages when stating the value of supplies of goods and services in his written final statement.

If the CA disagrees with the final statement issued by the Contractor he may request the Contractor to obtain the decision of the Commissioners on the VAT properly chargeable on the Contractor for all supplies of goods and services under this Contract and the Contractor shall forthwith request the Commissioners for such decision.

5.0 SITE CONDITIONS:

5.1 Use of site to be for no other purpose but for the carrying out of the works.

5.2 Parking is to be on the roadside or in the property driveway if permission is given by the employer.

5.3 Water shall be available from the property.

5.4 Electrics to be available from the property by agreement with the occupier.

5.5 No use of any telecom facility is permitted.

5.6 The Site is to be left in a clean and tidy condition at the end of each working day. Special care must be taken due to the nature of the

disability.

5.7 Skips to be used only with the Permission of the council, all licences should be bought prior to the use of skip. The Contractor must liaise with the employer as to the location of any skip.

6.0 SUBSTITUTE PRODUCTS:

If the Contractor wishes to substitute products of different manufacture to those specified, details must be submitted with the tender giving reasons for each proposed substitution. Proposed substitutions which have not been notified at tender stage may not be considered.

7.0 DEFINITIONS AND INTERPRETATIONS:

DEFINITIONS: The meaning of terms, derived terms and synonyms used in the specification is as defined below or in the appropriate British Standard or British Standard glossary.

TERMS USED IN THE SPECIFICATION. The following terms, if used, are inconsistent with the Conditions of Contract and must be read as follows:
CA Means the Contract Administrator.

CONTRACTOR means the contractor/subcontractor responsible for the whole of the work package.

IN WRITING: When required to notify, inform, instruct, agree, confirm, obtain information, obtain approval or obtain instructions through formal communication by CA.

APPROVAL (and words derived there from) means the approval in writing of the CA unless specified otherwise.

PRODUCTS means materials (including naturally occurring materials) and goods (including components, equipment and accessories) intended for permanent incorporation in the work.

CROSS - REFERENCES TO THE SPECIFICATION:

Where a numerical cross-reference to a specification section or clause is given on drawings or in any other document the Contractor must verify its accuracy by checking the remainder of the annotation or item description against the terminology used in the referred to section or clause.

Where a numerical cross-reference is not given the relevant section(s) and clause(s) of the specification will apply, cross-reference thereto being by means of related terminology.

Where a cross-reference for a particular type of work, feature, material or product is given, relevant clause(s) elsewhere in the referred to specification section dealing with general matters, ancillary products and workmanship also apply.

The Contractor must, before proceeding, obtain clarification or instructions in relation to any discrepancy or ambiguity which he may discover.

EQUIVALENT PRODUCTS:

Where the specification permits substitution of a product of different manufacture to that specified and such substitution is desired, before ordering the product notify the CA and, when requested, submit for verification documentary evidence that the alternative product is equivalent in respect of material, safety, reliability, function, compatibility with adjacent construction, availability of compatible accessories and, where relevant, appearance.

Any proposal for use of an alternative product must also include proposals for substitution of compatible accessory products and variation of details as necessary, with evidence of equivalent durability, function and appearance of the construction as a whole.

If such substitution is sanctioned, before ordering products, provide revised drawings, specifications and manufacturer's guarantees as required by CA.

EQUIVALENT PRODUCTS: Wherever products are specified by proprietary name and the phrase 'or equivalent' is not included, alternative products may be permitted subject to the requirements of above.

BRITISH STANDARD PRODUCTS: Where any product is specified to comply with a British Standard for which there is no equivalent European Standard it may be substituted by a product complying with a grade or category within a national standard of another Member State of the European Community or an international standard recognised in the UK specifying equivalent requirements and assurances in respect of material, safety, reliability, function, compatibility with adjacent construction, availability of compatible accessories and, where relevant, appearance.

In advance of ordering notify the CA of all such substitutions and, when requested, submit for verification documentary evidence confirming that the products comply with the specified requirements.

Any submitted foreign language documents must be accompanied by certified translations into English.

REFERENCES TO BSI DOCUMENTS are to the versions and amendments listed in the BSI Standards Catalogue.

MANUFACTURER AND REFERENCE: Where used in this combination:

- 'Manufacturer' means the firm under whose name the particular product is marketed.

- 'Reference' means the proprietary brand name and/or reference by which the particular product is identified.

SIZES: Unless otherwise stated: Products are specified by their co-ordinating sizes.

Cross section dimensions of timber shown on drawings are nominal sizes before any required planning.

8.0 TERMS USED IN REFURBISHMENT / ALTERATION:

REMOVE Means:

Disconnect, dismantle as necessary and remove the stated element, work or component and all associated accessories, fastenings, supports, linings and bedding materials, and dispose of unwanted materials. It does not include removing associated pipework, wiring, ductwork or other services.

KEEP FOR REUSE Means:

During removal to prevent damage to the stated components or materials, and clean off bedding and jointing materials.
Stack neatly, adequately protect and store until required by the Employer or for use in the works as instructed.

REPLACE Means:

Remove the stated existing components, features and finishes.
Provide and fit in lieu new components, features or finishes which, unless specified otherwise, must match those which have been removed.
Make good as necessary.

REPAIR Means:

Carry out local remedial work to components, features and finishes as found in the existing building. Re-secure or refix as necessary and leave in a sound and neat condition. It does not include:

- Replacement of components or parts of components.
- Redecoration.

MAKE GOOD Means:

Carry out local remedial work to components, features and finishes which have been disturbed by other, previous work under this Contract and leave in a sound and neat condition. It does not include:

- Replacement of components or parts of components.
- Redecoration.

The meaning of the term shall not be limited by this definition where used in connection with the defects liability provisions of the Contract.

EASE means make minor adjustments to moving parts of the stated component to achieve good fit in both open and closed positions and ensure free movement in relation to fixed surrounds. Make good as necessary.

TO MATCH EXISTING Means:

Use products, materials and methods to match closely all visual characteristics and features of the existing work, with joints between existing and new work as inconspicuous as possible, all to approval of appearance.

9.0 DOCUMENTS PROVIDED ON BEHALF OF EMPLOYER:

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

10.0 DOCUMENTS TO BE PROVIDED BY CONTRACTOR ONLY IF REQUIRED BY CONTRACT ADMINISTRATOR [CA]:

PRODUCTION INFORMATION:

The Contractor must: Liaise with the CA, and the Occupational Therapist and others as necessary to help ensure coordination of the work with related building elements and services.

Provide drawings and other information as specified showing such details of the work as the CA may reasonably require.

Submit to the CA for inspection, make any necessary amendments and resubmit for further comment unless confirmed otherwise. Submit sufficient copies of final information to the CA for distribution to all affected parties.

CONSTRUCTION STAGE METHOD STATEMENTS:

Developed from the tender stage / Principle Designer scheme all necessary method statements and showing the Contractor's final proposals must be submitted before starting work on site.

CDM PRINCIPAL DESIGNER:

All to be done by the above party.

PREPARATORY WORK BY OTHERS: It is the Contractor's responsibility to confirm and amplify any information provided by others.

MAINTENANCE INSTRUCTIONS AND GUARANTEES:

Retain copies delivered with components and equipment (failing which, obtain), register with manufacturer as necessary and hand over to CA on or before Completion.

11.0 MATERIALS AND WORK GENERALLY:

GOOD PRACTICE: Where and to the extent that materials, products and workmanship are not fully detailed or specified they are to be:

Of a standard appropriate to the works and suitable for the functions stated in or reasonably to be inferred from the project documents, and

In accordance with good building practice.

GENERAL QUALITY OF PRODUCTS:

Products to be new unless otherwise specified.

For products specified to a British or European Standard obtain certificates of compliance from manufacturers when requested by CA.

Where a choice of manufacturer or source of supply is allowed for any particular product, the whole quantity required to complete the work must be of the same type, manufacture and/or source unless otherwise approved.

Produce written evidence of sources of supply when requested by CA.

Ensure that the whole quantity of each product required to complete the work is of consistent kind, size, quality and overall appearance.

<p>Where consistency of appearance is desirable ensure consistency of supply from the same source. Unless otherwise approved do not use different colour batches where they can be seen together.</p> <p>If products are prone to deterioration or have a limited shelf life, order in suitable quantities to a programme and use in appropriate sequence. Do not use if there are any signs of deterioration, setting or other unsatisfactory condition.</p> <p>PROPRIETARY PRODUCTS: Handle, store, prepare and use or fix each product in accordance with its manufacturer's current printed or written recommendations/instructions.</p> <p>Inform CA if this conflicts with any other specified requirement. Submit copies to CA when requested.</p> <p>The tender will be deemed to be based on the products specified and recommendations on their use as described in the manufacturers' literature.</p> <p>Obtain confirmation from manufacturers that the products specified and recommendations on their use have not been changed since that time.</p> <p>Where such change has occurred, inform CA and do not place orders for or use the affected products without further instructions.</p> <p>Where British Board of Agreement certified products are used, comply with the limitations, recommendations and requirements of the relevant valid certificates.</p> <p>CHECKING COMPLIANCE OF PRODUCTS: Check all delivery tickets, labels, identification marks and, where appropriate, the products themselves to ensure that all products comply with the project documents.</p> <p>Where different types of any product are specified, check to ensure that the correct type is being used in each location. In particular, check that:</p> <p>The sources, types, qualities, finishes and colours are correct, and match any approved samples.</p> <p>All accessories and fixings which should be supplied with the goods have been supplied.</p> <p>Sizes and dimensions are correct. Where tolerances of components are critical, measure a sufficient quantity to ensure compliance.</p> <p>The delivered quantities are correct, to ensure that shortages do not cause delays in the work.</p> <p>The products are clean, undamaged and otherwise in good condition.</p> <p>Products which have a limited shelf life are not out of date.</p> <p>PROTECTION OF PRODUCTS: Prevent over-stressing, distortion and any other type of physical damage.</p> <p>Keep clean and free from contamination. Prevent staining, chipping, scratching or other disfigurement, particularly of products exposed to view in</p>		
--	--	--

<p>the finished work.</p> <p>Keep dry and in a suitably low humidity atmosphere to prevent premature setting, moisture movement and similar defects. Where appropriate store off the ground and allow free air movement around and between stored products.</p> <p>Prevent excessively high or low temperatures and rapid changes of temperature in the products.</p> <p>Protect adequately from rain, damp, frost, sun and other elements as appropriate. Ensure that products are at a suitable temperature and moisture content at time of use.</p> <p>Ensure that sheds and covers are of ample size, in good weatherproof condition and well secured.</p> <p>Keep different types and grades of products separately and adequately identified.</p> <p>Keep products in their original wrappings, packings or containers until immediately before they are used, notify CA of use of product.</p> <p>Wherever possible retain protective wrappings after fixing and until shortly before Completion.</p> <p>Ensure that protective measures are fully compatible with and not prejudicial to the products/materials.</p> <p>SUITABILITY OF RELATED WORK AND CONDITIONS: Before starting work, check and confirm to the CA that:</p> <p>Previous, related work is appropriately complete, in accordance with the works documents, to a suitable standard and in a suitable condition to receive the new work.</p> <p>All necessary preparatory work has been carried out and the environmental conditions are suitable.</p> <p>GENERAL QUALITY OF WORKMANSHIP: Operatives must be appropriately skilled and experienced for the type and quality of work.</p> <p>Take all necessary precautions to prevent damage to the work from frost, rain and other hazards.</p> <p>Inspect components and products carefully before fixing or using and reject any which are defective.</p> <p>Fix or lay securely, accurately and in alignment.</p> <p>Where not specified otherwise, select fixing and jointing methods and types, sizes and spacing of fastenings to comply with relevant British Standards.</p> <p>Provide suitable, tight packings at screwed and bolted fixing points to take up tolerances and prevent distortion. Do not over tighten fixings.</p>		
---	--	--

Adjust location and fixings of components and products. Make sure joints are to be finished with mortar or sealant or otherwise left open to view are even and regular.

Ensure that all moving parts operate properly and freely. Do not cut, grind or plane prefinished components and products to remedy binding or poor fit without approval.

BS 8000: BASIC WORKMANSHIP:

Where compliance with BS 8000 is specified, this is only to the extent that the recommendations therein define the quality of the finished work.

Where BS 8000 gives recommendations on particular working methods or other matters which are properly within the province and responsibility of the Contractor, compliance therewith will be deemed to be a matter of general industry good practice and not a specific requirement of the CA under the Contract.

If there is any conflict or discrepancy between the recommendations of BS 8000 on the one hand and the project documents on the other, the latter will prevail.

12.0 SAMPLES/APPROVALS:

APPROVAL OF PRODUCTS: Where approval of a product is specified the requirement for approval relates to a sample of the product and not to the product as used in the works. Submit a sample or other evidence of suitability.

Do not confirm orders or use the product until approval of the sample has been obtained. Retain approved sample in good, clean condition on site. Ensure that the product used in the Works matches the approved sample.

SAMPLES OF FINISHED WORK: Where a sample of finished work is specified for approval, the requirement for approval relates to the sample itself (if approval of the finished work as a whole is required this is specified separately).

Obtain approval of the stated characteristic(s) of the sample before proceeding with the works. Retain approved sample in good, clean condition on site.

Ensure that the relevant characteristic(s) of the works match the approved characteristic(s) of the sample. Remove samples which are not part of the finished works when no longer required.

13.0 ACCURACY:

ACCURACY OF INSTRUMENTS: Use instruments and methods described in BS 5606, Appendix A to give the following degrees of accuracy in measurement.

SETTING OUT: Check the setting out of preparatory work by others against the dimensions shown on the drawings, and record the results on a copy of the drawings. Notify CA in writing of any discrepancies and obtain

instructions before proceeding.

Drawings are noted as 'critical': Set out and construct the works to ensure compliance with the tolerances stated on the drawings.

14.0 SUPERVISION/ INSPECTION/ DEFECTIVE WORK:

Cooperate with other Contractors, suppliers, local authorities and statutory undertakers in the execution of their work.

DEFECTS IN EXISTING CONSTRUCTION to be reported to CA without delay. Obtain instructions before proceeding with work which may:
Cover up or otherwise hinder access to the defective construction, or
Be rendered abortive by the carrying out of remedial work.

TEST CERTIFICATES: Submit a copy of each certificate to CA as soon as practicable and keep copies of all certificates on site.

QUALITY CONTROL: Establish and maintain procedures to ensure that the works, including the work of all sub contractors, comply with specified requirements.

15.0 WORKING HOURS:

Unless agreed otherwise the works are to be undertaken in a continuous manner wherever possible.

Working hours to be 8.00 am - and 6.00 pm Monday to Friday inclusive.
Weekend working by arrangement with the resident's consent and only and between the hours of 8.00 and 1.00 pm on Saturdays.

16.0 SECURITY AND PROTECTION:

SECURITY:

Adequately safeguard the site, the Works, products, materials, plant, and any existing buildings affected by the Works from damage and theft. Take all reasonable precautions to prevent unauthorised access to the site, the Works and adjoining property.

STABILITY:

Accept responsibility for the stability and structural integrity of the Works during the Contract, and support as necessary. Prevent overloading.

OCCUPIED PREMISES:

Existing buildings will be occupied and/or used during the Contract. Carry out the Works without undue inconvenience and nuisance and without danger to occupants and users.

PROTECT AGAINST THE FOLLOWING:

NOISE:

Comply generally with the recommendations of BS 5228: Part 1, clause 9.3

<p>for minimising noise levels during the execution of the works.</p> <p>Fit all compressors, percussion tools and vehicles with effective silencers of a type recommended by manufacturers of the compressors, tools or vehicles.</p> <p>POLLUTION: Take all reasonable precautions to prevent pollution of the site, the Works and the general environment including streams and waterways. If pollution occurs, inform the appropriate Authorities and the CA without delay and provide them with all relevant information.</p> <p>USE OF PESTICIDES will not be permitted.</p> <p>NUISANCE: Take all necessary precautions to prevent nuisance from smoke, dust, rubbish, vermin and other causes.</p> <p>ASBESTOS BASED MATERIALS: Report immediately to the CA any suspected asbestos based materials discovered during demolition / refurbishment work. Avoid disturbing such materials. Agree with the CA methods for safe removal or encapsulation.</p> <p>FIRE PREVENTION: Take all necessary precautions to prevent personal injury, death, and damage to the Works or other property from fire. Comply with Joint Code of Practice 'Fire Prevention on Construction Sites' published by the Building Employers Confederation and the Loss Prevention Council.</p> <p>BURNING ON SITE of materials arising from the work will not be permitted.</p> <p>WATER: Prevent damage from storm and surface water. (Items for keeping the site and excavations free of water are given elsewhere).</p> <p>MOISTURE: Prevent the work from becoming wet or damp where this may cause damage. Dry out the Works thoroughly. Control the drying out and humidity of the Works and the application of heat to prevent:</p> <ul style="list-style-type: none"> ▪ Blistering and failure of adhesion. ▪ Damage due to trapped moisture. ▪ Excessive movement. <p>INFECTED TIMBER: Where instructed to remove timber affected by fungal/insect attack from the building. Complete in a way which will minimise the risk of infecting other parts of the building.</p> <p>WASTE: Remove rubbish, debris, surplus material and spoil regularly and keep the site and Works clean and tidy. Remove all rubbish, dirt and residues from voids and cavities in the construction before closing in.</p>		
--	--	--

Ensure that non-hazardous material is disposed of at a tip approved by a Waste Regulation Authority.
Remove all surplus hazardous materials and their containers regularly for disposal off site in a safe and competent manner as approved by a Waste Regulation Authority and in accordance with relevant regulations.
Retain waste transfer documentation on site.

ELECTROMAGNETIC INTERFERENCE:

Take all necessary precautions to avoid excessive electromagnetic disturbance of apparatus outside the site.

17.0 PROTECT THE FOLLOWING:

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

EXISTING SERVICES:

Notify all service authorities and/or adjacent owners of the proposed works not less than one week before commencing site operations.
Before starting work check positions of existing mains/services.

Where positions are not shown on drawings obtain relevant details from service authorities or other owners.

Observe service authority's recommendations for work adjacent to existing services.

Adequately protect, and prevent damage to all services. Do not interfere with their operation without consent of the service authorities or other owners.

If any damage to services results from the execution of the Works, notify CA and appropriate service authority without delay. Make arrangements for the work to be made good without delay to the satisfaction of the service authority or other owner as appropriate. Any measures taken by the CA to deal with an emergency will not affect the extent of the Contractor's liability. Replace any marker tapes or protective covers disturbed during site operations to the service authority's recommendations.

ROADS AND FOOTPATHS: Adequately maintain roads and footpaths within and adjacent to the site and keep clear of mud and debris. Any damage to roads and footpaths caused by site traffic or otherwise consequent upon the Works must be made good to the satisfaction of the Local Authority or other owner. Bear any costs arising.

RETAINED TREES/HEDGES/SHRUBS/GRASSED AREAS:

Adequately protect and preserve, except those which are to be removed. Replace to approval or treat as instructed any species or areas damaged or removed without approval.

Mature trees and shrubs which, due to the Contractor's negligence, are

uprooted, destroyed, or in the opinion of the CA, damaged beyond reasonable chance of survival in their original shape, must be replaced with those of a similar type and age at the Contractor's expense.

TREES TO BE RETAINED: Unless agreed otherwise by the CA, do not: Dump spoil or rubbish, excavate or disturb top soil, park vehicles or plant, store materials or place temporary accommodation within the branch spread.

- Sever roots exceeding 25 mm in diameter.
- Change level of ground within area 3 m beyond the branch spread

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

EXISTING WORK: Prevent damage to existing property undergoing alteration or extension and make good to match existing any defects caused. Remove existing work the minimum necessary and with care to reduce the amount of making good to a minimum.

BUILDING INTERIORS: Protect building interiors exposed to weather during the course of alteration work with temporary enclosures of sufficient size to permit execution of the work and which will remain weather tight in severe weather.

EXISTING FURNITURE, FITTINGS AND EQUIPMENT:

Prevent damage to any furniture, fittings or equipment left in the existing property. Move as necessary to enable the Works to be executed, cover and protect as necessary and replace in original positions.

EXISTING STRUCTURES:

Provide and maintain during the execution of the Works all incidental shoring, strutting, needling and other supports as may be necessary to preserve the stability of existing structures on the site or adjoining that may be endangered or affected by the Works.

Support existing structure as necessary during cutting of new openings or replacement of structural parts.

Do not remove supports until new work is strong enough to support the existing structure. Prevent overstressing of completed work when removing supports.

18.0 TEMPORARY WORKS:

TEMPORARY HOARDING - Erect any temporary hoardings as necessary.

NAME BOARD: Obtain approval for before erecting a name board.

19.0 BUILDING CONTROL APPROVALS/ INSPECTIONS:

Building Control must be given adequate notice of all required inspections and approvals .This is the direct responsibility of the contractor.

Completion Certificate to be issued in advance of Practical Completion.

20.0 SERVICES INSTALLATION CERTIFICATION:

To be provided prior to Practical Completion. The penultimate certificate will not be authorised until such time as issued.

ALL INSTALLATION WORKS MUST BE UNDERTAKEN BY A COMPETENT PERSON, DULY ACCREDITED TO AN APPROPRIATE TRADE BODY.

21.0 WORK AT COMPLETION:

COMPLETION OF THE WORK GENERALLY:

Make good all damage consequent upon the work.

Remove all temporary markings, coverings and protective wrappings unless otherwise instructed.

Clean the works thoroughly and remove all rubbish and surplus materials consequent upon the execution of the work.

Cleaning materials and methods to be as recommended by manufacturers of products being cleaned, and to be such that there is no damage or disfigurement to other materials or construction.

Obtain COSHH dated data sheets for all materials used for cleaning and ensure they are used only as recommended by their manufacturers.

Touch up minor faults in newly painted/repainted work, carefully matching colour, and brushing out edges. Repaint badly marked areas back to suitable breaks or junctions.

Adjust, ease and lubricate moving parts of new work as necessary to ensure easy and efficient operation.

<p>B MATERIALS & WORKMANSHIP SPECIFICATION</p>		
---	--	--

<p>1.0 PREPARATION WORKS:</p>	<p>500</p>	
<p>Consolidate site prior to start of building work; fence off working area, relocate affected gullies, waste pipes and RWP etc .</p>		
<p>Allow to demolish and rebuild of side gate boundary wall and remove wooden gate to allow access for work.</p>	<p>100</p>	
<p>Break out and dispose concrete slab/ paving to the rear of the gate. Grub out base to slab. OR Allow extricating grass/roots within the outline of the proposed to enable clear ground soil.</p>	<p>300</p>	
<p>Allow to remove summer house to the to the far right corner/ elsewhere of the corner on a raised floor.</p>		
<p>2.0 EXCAVATING AND FILLING:</p>	<p>4000</p>	
<p><i>To be read with Preliminaries / General conditions/ Site notes.</i></p>		
<p>To excavate for oversight as per proposed plan and Notes & Specifications.</p>		
<p>GENERAL/ THE SITE:</p>		
<p>SOIL AND STRATA:</p>		
<p>Site investigation information is not available. Make all necessary enquiries concerning the nature and location of spoils and strata.</p>		
<p>GROUND WATER LEVEL (Unknown)</p>		
<p>Make all necessary enquiries concerning ground water level and allow for variations from this level when working on any part of the site.</p>		
<p>EXISTING SERVICES:</p>	<p>900</p>	
<p>To be located by the contractor prior to commencement of works.</p>		
<p>SITE FEATURES TO BE RETAINED (if any):</p>		
<p>N/A</p>		
<p>CLEARANCE/ EXCAVATING:</p>		
<p>SITE FEATURES:</p>		
<p>Before starting work verify with client which existing fences, gates, walls, roads, paved areas and other site features are to be removed. Materials arising are to be removed from site.</p>	<p>500</p>	
<p>SITE CLEARANCE:</p>		
<p>Clear site of rubbish and debris.</p>		
<p>Before beginning general excavation or filling, excavate top soil from areas where there will be re-grading, buildings, paving/roads and other areas where specified.</p>		

<p>TRENCH FILL FOUNDATIONS:</p> <p>Provide 750mm x 600mm trench fill foundations, concrete mix to conform to BS EN 206-1 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2010 Building Regulations A1/2 and BS 8004:1986 Code of Practice for Foundations. Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting internal walls to be min 600mm below ground level. .</p> <p>FOUNDATIONS IN MADE UP GROUND: Excavate down to a natural formation of undisturbed sub soil. Obtain instructions if this is at a lesser depth than that shown on the drawings.</p> <p>UNSTABLE GROUND: Inform CA without delay if any newly excavated face will not remain unsupported sufficiently long to allow the necessary earthwork support to be inserted. If the instability is likely to affect adjacent structures or roadways, take appropriate emergency action until instructions are obtained.</p> <p>UNRECORDED FEATURES: Where old foundations, beds, voids, basements, filling, tanks, pipes, cables, drains, manholes, watercourses, ditches, etc. not shown on the drawings are encountered, prepare method statement as to the removal.</p> <p>EXCESS EXCAVATION: Backfill any excavations taken: Wider than required with the material specified for backfilling. Deeper than required with well graded granular material or lean mix concrete.</p> <p>ACCURACY: Permissible deviations from formation levels: Beneath mass concrete foundations: +/- 25 mm Beneath ground bearing slabs and r.c. foundations: +/- 15 mm Embankments and cuttings: +/- 50 mm Ground abutting external walls: +/- 50 mm, but such as to ensure that finished level is not less than 150 mm below dpc.</p> <p>3.0 OTHER EXCAVATIONS:</p> <p>Hand dig or machine dig in one operation area as shown on drawings. Ensure that excavations and areas to be filled are free from loose soil, rubbish and standing water. Leave ready for the acceptance of Over site specification.</p> <p>DISPOSAL OF MATERIALS:</p> <p>TOP SOIL:</p>	600	
---	-----	--

<p>Stockpile all excavated preserved top soil in temporary spoil heaps.</p> <p>SURPLUS EXCAVATED TOPSOIL: Remove from site</p>		
<p>4.0 CONCRETE MIX TO TRENCH IN CONJUNCTION WITH ABOVE</p> <p>Lay ready mix trench fill C15P foundations to trench. Concrete must be obtained from a plant which holds current certification meeting the requirements of the NACCB, Category 2 for product conformity.</p> <p>Foundation to be 450mm width and to a minimum depth of 1000mm, and at least 600mm below the deepest tree root. Supply and fit 50mm 'clay master' clayboard both faces of the footing from the top of the footing to no more than 500mm away from the base of the footing. External face of footing to be lined with suitably graded polythene sheeting.</p> <p>SUBSTITUTION OF STANDARD FOR DESIGNATED MIXES: Where appropriate, Standard mix(es) to BS 5328:Part 2, Section 4 will be permitted in substitution for specified Designated mixes in accordance with BS 5328:Part 1, Table 13 and in each case subject to approval.</p> <p>If Standard mixes are made on site comply with BS 8000: Section 2.1, Subsections 2, 3 and 4. Generally mixes to be 1: 8.</p> <p>ADMIXTURES FOR DESIGNED/PRESCRIBED MIXES To BS 5075: Use only if specified or approved, and then in accordance with their manufacturer's recommendations. Do not use admixtures containing calcium chloride. Ensure that admixtures are compatible with all other materials, including other admixtures.</p> <p>CURING AND PROTECTION</p> <p>CURING: Prevent surface evaporation from concrete throughout the period(s) specified below by retaining formwork in position and, if necessary, covering surfaces immediately after striking.</p> <p>CURING PERIODS : To be as the recommended time for the mixed used, taking into account the mass and local conditions.</p> <p>PROTECTION: Prevent damage to concrete, including: Surfaces generally: From rain, indentation and other physical damage. Surfaces to be exposed in the finished work: From dirt, staining, rust marks and other disfiguration.</p> <p>Immature concrete: From thermal shock, physical shock, overloading, movement and vibration.</p> <p>In cold weather: From entrapment of water in pockets, etc. and freezing expansion thereof</p>	2000	

4.0b CONCRETE FLOOR [U-Value 0.22 W/m²K]:

Please refer to General Notes & Specification from architect to be:

3000

Lay 100mm conciliated and well compacted hardcore to site.
Lay 25mm mechanically compacted sand blinding.
Lay 1200 gauge DPM.
Lay 50mm Sand/Cement Screed
Finished floor level to match that of the existing or as specify by the CA

Hardcore:

Clean granular material, well graded, passing a 75 mm BS sieve but retained on a 20 mm BS sieve and in any one layer only one of the following:

Crushed hard rock crushed concrete, crushed brick or tile, free from plaster, timber and metal.

Spread and level both backfilling and general filling in layers not exceeding 100 mm. Thoroughly compact each layer using a vibrating roller, vibrating plate compactor, vibro-tamper, power rammer or other suitable means.

Blinding:

Surfaces to receive sheet overlays or concrete to have sufficient sand, fine gravel, PFA or other approved fine material applied to fill interstices and provide a close smooth surface.

Permissible deviations on surface level: +0 -25 mm.

DPM:

To be 1200 gauge laid over and linked to the DPC, including the existing property DPC.

Insulation:

To be 100mm Jablo Flooring grade SD installed in accordance with manufacturers recommendations.

Solid Floor Slab:

To meet min U value required of 0.22 W/m²K Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over a 1200 gauge polythene DPM. DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 75mm thick Celotex GA4000. 25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement

4.0 BRICK/BLOCK CAVITY WALLING [U-Value of 0.22 W/m²K]:

Please refer to General Notes & Specification from architect to be:

Construct: New cavity wall construction using 100mm block work with 85mm cavity and 2nd skin of 100mm blocks. Cavity to be filled with 100mm Dritherm 32 or similar approved plus cavity wall batts. Wall to achieve a 'u' value of no less than 0.22W/2.

Include for all wall ties, closers, airbricks, vertical and horizontal dpc and any other associated sundries.

LAYING GENERALLY:

Build walls in stretching half lap bond when not specified otherwise. Plumb perpends of face work every third or fifth cross joint along a course and even out the joint widths in between. Lay bricks/blocks on a full bed of mortar; do not furrow. (20mm two coat sand/cement render to comply to BS13914-1:2005 with water proof additives.

Fill all cross joints and collar joints; do not tip and tail.
Mortar to generally be 1:1:6 cement/lime/sand and to have a weather struck joint.

Fill cavities with concrete up to 150 mm below ground level dpc. Concrete mix to BS 5328, Designated mix GEN1 or Standard mix ST2, high workability. Cavity closure to be provided at window and door reveals to be 'thermabate cavity closure'

CAVITY INSULATION:

Insulation: Mineral fibre batts to BS 6676: Part 1 or Agreement certified.
Size to suit wall tie spacing, thickness: to be 100mm.
Manufacturer and reference: Dritherm plus.

Store, handle and install to BS 6676: Part 2, clauses 4 and 5, ensuring that no gaps are left in the insulation layer. Keep insulation dry and free from mortar droppings, grout and other debris during the course of construction. If an air gap is required to ensure that this is constant.

Insulation to be continuous with top of wall and underside of roof and to bottom of cavity fill.

Cavity to be filled with concrete to 250mm below dpc.

GENERAL WORKMANSHIP:

ACCURACY:

Keep courses level and true to line. Accurately plumb all wall faces, angles and features.

LINTEL BEARINGS:

Carefully predetermined setting out to ensure that full-length masonry units occur below lintel ends.

SUPPORT OF EXISTING WORK: Where new lintels or walling are to support existing structure, completely fill top joint with semi dry mortar, hard packed and well rammed to ensure full load transfer after removal of temporary supports.

JOINTS IN MASONRY TO BE PLASTERED OR RENDERED:

Unless keyed units or metal lathing are used, rake out joints as work proceeds, to a depth of approximately 15 mm.

FIRE STOPPING:

Fill joints around joist ends built into cavity walls with mortar to seal cavities from interior of building.

WALL TIES:

To BS 1243 centred at 900mm horizontally and 450mm vertical centres.

Bed not less than 50 mm into bed joint of each leaf.

Slope slightly downwards towards outer leaf with drip centred in the cavity and pointing downwards. Do not bend ties to suit coursing.

Provide additional ties within 225 mm of reveals of unbounded openings.

DAMP PROOF COURSE:

To be Bitumen based to BS 6398

FLEXIBLE SHEET CAVITY TRAYS:

Bitumen based dpc material to BS 6398, pre-formed cavity trays to manufacturer's instructions.

Preformed trays/ junction cloaks/stop ends may be used in lieu, subject to approval.

MOVEMENT JOINTS :

To be used every 6 metres and should be provided no nearer than 3 metres to a corner.

The joint is to extend the full height of the external skin but not below the dpc. Straps to over the joint to be 25mm x 3mm x 200mm at 400 vertical centres to stabilise any longitudinal movement.

Joints should be filled using expanding foam carefully cut back out 12mm and then capped with 12mm coloured mastic to suit surface finish.

INSTALLATION OF DPCS/CAVITY TRAYS/FLASHINGS:**COLD WEATHER WORKING:**

In cold weather warm dpc rolls before unrolling, to avoid cracking.

HORIZONTAL DPCS:

DPC's to be a minimum of 150mm above ground level. If this cannot be achieved then an ACO drain or a pea shingle drain must be formed.

Lay in continuous lengths on a full even bed of fresh mortar, with 100 mm laps at joints and full laps at angles.

<p>Width of dpc to be at least full width of masonry leaf unless otherwise specified. Do not cover edges of dpc with mortar.</p> <p>Where there are separate dpc's in each leaf of a cavity wall, ensure that edges do not project into the cavity.</p> <p>Immediately lay at least one further course of masonry on a thin even bed of fresh mortar. Keep finished joint thickness as close to normal as practicable. All new DPC's to be lapped into existing brickwork Damp course.</p> <p>.</p> <p>MOVEMENT JOINTS WITH SEALANT: Build in as the work proceeds ensuring no projections into cavities and correct depth of joint to receive sealant system. Thickness of filler to match design width of joint.</p> <p>Prepare joints and apply sealant as section.</p> <p>POINTING IN FLASHINGS: Remove dust, lightly wet and neatly point with mortar specified for walling. Ensure joint is completely filled and finish flush.</p> <p>JOINTING TO EXISTING STRUCTURE: A tied movement joint using a furfix profile or similar approved is to be used and to be fully sealed with mastic.</p> <p>BRICK/BLOCK UP OPENINGS: Include to Brick up / Block openings all as shown on the drawing. Internally walls to be hard wall plastered to a smooth finish. Where visible externally, brickwork must be toothed to match the existing brickwork.</p> <p>6.0 LINTELS:</p> <p><i>Refer to Architect Drawing, Notes & Specifications</i></p> <p>Provide New Lintels to above new window openings. Lintel lengths to be selected to ensure a 150mm min bearing to lintel ends.</p> <p>CONCRETE LINTEL – Prestressed reinforced concrete lintel to BS5977 TIMBER LINTEL – 2no 100 x 50mm SW timbers to Internal stud partition.</p> <p>Include to make good to existing plasterwork/ceilings and decoration as necessary.</p> <p>7.0 BEAMS: A qualified structural engineer shall be commissioned by the contractor to provide calculations to prove suitability of proposed steel beams and</p>	<p>1000</p>	
--	-------------	--

<p>existing structure together with advising on load paths / new column positions etc. All calculations are to be submitted and approved by Building Control prior to construction on site.</p> <p>See tables. All steels to conform to BS 449 and BS 5950. All steel works to be carried out in accordance with all relevant codes of practice. All steelwork must be encased in 12.5mm plasterboard and 9.5mm plaster skim, or otherwise provided with intumescent paint to provide a minimum of 30mins fire protection.</p> <p>Where the inner leaf is used to provide a major contribution to the thermal insulation of a cavity wall, any padstone that is needed should have similar thermal properties to the masonry used for the rest of the inner leaf or precautions should be taken to prevent cold bridging.</p> <p>For padstone sizes less than 215mm x 100mm, engineering bricks will be suitable.</p> <p>For steelwork which is to be bolted (using black bolts), or not connected, an acceptable coating system is one coat of high build zinc phosphate primer and one coat of bituminous paint.</p> <p>Where steelwork is to be protected by intumescent paint for fire purposes, manufacturers' recommendations should be followed.</p> <p>The following table to be confirmed by a structural engineer prior to any works being undertaken</p> <p>8.0a FLAT ROOF STRUCTURE & COVERING [U-Value of 0.18W/m²K]: <i>Refer to Notes & Specifications for Felt roof - item 8.0; 8.1- 8.3</i></p> <p>Supply and fit new external quality SC4 grade 50mm x 170mm C16 timber Joists at 400 centres securely fixed to 100 x 75mm plate <i>and to galvanised joist hangers in turned fixed to timber 50mm x 100mm plate fixed to wall with M12 bolts at 600mm c/s.</i></p> <p>Include for galvanised steel straps min section 5mm x 30mm securely fastened to the joists and provided with split and upset ends or similar approved means for building the wall. Include to provide 50mm x 100mm timber noggin to beneath strap at ceiling level.</p> <p>Supply and fit new sw firing timbers to achieve a 1 in 40 fall fixed on the new joists at 400 centres.</p> <p>To achieve U value 0.18 W/m²K 12.5mm spa solar reflective chippings to achieve aa designated fire rating for surface spread of flame bedded in bitumen on three layer felt to BS 6229:2003 over 120mm Celotex Crown-Up. Insulation bonded to VCL fixed to 22mm exterior grade plywood on firrings to give 1:60 fall on 47 x 175mm C24 timber joists at 400 ctrs. Ceilings to be 12.5mm plasterboard over vapour barrier with skim plaster finish.</p> <p>100m x 50mm C16 grade timber wall plates to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps at maximum 2.0m centres fixed to internal wall faces.</p> <p>Supply and fit new 160mm 'jabdec' or similar approved insulation board all as to manufacturer's instructions.</p>	2500	
--	------	--

<p>Store, handle and install to BS 6676: Part 2, clauses 4 and 5, ensuring that no gaps are left in the insulation layer. Keep insulation dry at all times.</p> <p>Supply and lay Separating venting membrane of single ply felt laid dry on insulation with 25mm hole at 100mm centres.</p> <p>Up stand Details: Felt to be tucked into brickwork to a minimum up stand of 150mm, Include to install code 4 flashing is to cap over up stand to be pointed into brickwork, or to under new coping stones.</p> <p>Eave Detail: Wetted Apron nailed to 25 x 38mm continuous drip batten with galvanised clout nails. Flashing to be placed under roof felt with laps of 50mm from verge.</p> <p>Supply and fix a pre-primed 200mm x 25mm sw fascia board. Include to decorate using 1 No. undercoat and 2 No. gloss finish. All works to conform to current Building Regulations.</p> <p>Trimmers to be doubled up and fixed using 51mm double sided round tooth plate connectors and M12 bolts at 600mm centres. Proprietary joist hangers to be used to secure trimmed joists.</p>		
<p>9.0 WINDOWS [U-Value of 1.6 / 1.8 W/m²K} <i>See Notes & Specifications item 10.0. 10.1 -10.2</i></p> <p>New and replacement windows to be double glazed with 16mm argon gap and soft coat low-E glass. Window Energy Rating to be Band C or better and to achieve U-value of 1.6 W/m²K. The door and window openings should be limited to 25% of the extension floor area plus the area of any existing openings covered by the extension Seal the window joint gap using polythene foam (between 5-10mm) and sealed with mastic bead to a minimum depth of 6mm.</p> <p>Carry out all making good internally as required including for any additional Bead/quadrants or cover-strips. Window hardware must be key lockable with 2No. keys provided to the client.</p>	500	
<p>10.0 INTERNAL DOORS:</p> <p>D1 - To be flush internal quality sw door, to include door lining, architraves and all ironmongery. Include also for Architraves to door-sets. <i>Doors to be minimum half hour fire check door.</i></p>	200	

12.0	RAINWATER DRAINAGE:	2000	
<p>New rainwater goods to be new 110mm UPVC half round gutters taken and connected into 68mm dia UPVC downpipes. Rainwater taken to new soakaway, situated a min distance of 5.0m away from any building, via 110mm dia UPVC pipes surrounded in 150mm granular fill. Soakaway to be min of 1 cubic metre capacity (or to depth to Local Authorities approval) with suitable granular fill and with</p> <p>New soakaway to be connected to new UPVC Osma drain 100mm dia laid to a fall of 1:40 in strict accordance with the manufacturer's written instructions.</p>			
<p>Max area served by Soak away = sq m Capacity = sq m divided by 16.5 = cubic capacity required geotextile surround to prevent migration of fines. If necessary carry out a porosity test to determine design and depth of soakaway.</p>		2000	
13.0	INTERNAL WORKS:		
<p>Plaster all new internal block/brick walls of new build/ex property using Hard Wall finish. Allow for cover with 15mm soundbloc or similar approved plasterboard/ finish skim coat on one sides.</p> <p>Include to incorporate a new door lining as shown Plaster board to all sides of wall skim finish to leave ready for decoration.</p>			
<p>Tack up 12.5mm gypsum plasterboard to new extension ceiling. Boards to be staggered and securely spiked to joists. Scrim up joints, and skim to smooth finish using 1no. coat of board finish</p>			
<p>Decorate new walls (where area has not been wall tiled) and all new plaster with 2no. Emulsion finish.</p>			
<p>Decorate new ceilings with 2no. white emulsion finish.</p>			
<p>Decorate internal doors and Architrave using 1no primer and 2no. gloss finish</p>		1500	
15.0	HEATING:		
<p>Extend existing Heating system to accommodate a new tower rail radiator sized according to manufacturer's specifications.</p>			
<p>The Contractor is responsible for sizing the new radiator to achieve the following air temperatures when the external temperature is at minus one degree C and a maximum of two air changes per hour, in accordance with BS5449. Include for TRV's to new radiators.</p>			
<p>Heating installation to be in compliance with Good Practice guide 302.</p>			
<p>1no. Radiator to Bathroom and Bedroom</p>			
Room	Temp (degrees C)	Air (CH/HR)	

Bathroom	21	2		
Bedroom	21	1		
<p>Fit drain cock and label stop valves as required.</p> <p>Fit drain cock and label stop valves as required.</p> <p>Insulate pipework with 13/19mm thick tubular sleeve to 15mm and 22mm diameter pipework respectively.</p>			950	
17.0 ELECTRICS				
<p>2no. 2 Gang 13 Amp Sockets to the Bedroom Low level sockets x 3</p> <p>Install new single way light switching to BS1363 for new room layout.</p> <p>Lighting to be all in accordance with approved doc.L1. To be Legrand type 660306 energy saving 10/13w 75mm pendant & lamp, or similar. Lumens efficiency more that 40 lumens/circuit watt. Include for lighting switches.</p> <p>All wiring and electrical work will be designed, installed, inspected and tested in accordance with the requirements of BS7671, IEE 17th edition</p> <p>Wiring guidance and Building regulation PART P (electrical safety) by a competent person registered with an electrical self-Certification scheme authorised by the Secretary of State (BRE, BSI, ELECSA, NAPIT or NICEIC).</p> <p>The competent person is to send to the local authority a self certification certificate within 30 days of completion of the electrical works. The client must receive both a copy of the self certification certificate and a BS7671 Electrical Installation Test Certificate and forward copies to Building Control.</p> <p>ALL electrical wiring to be in conduit chased into wall, all dropped down any new partitions.</p>				
			250	
20.0 FIRE & SMOKE PROTECTION SYSTEM:				
<p>Provide and install smoke and heat detectors to the hall (ground floor and landing (first floor) to be mains powered all to BS 5446 and BS 5839. NB: the above items already provided but to be checked for compliance.</p>				
<u>Collection Page</u>				

A. Preliminaries pgs. 3 - 21

- 1.0 Project Details 1.1 - 1.7 Page 4 - 5
- 2.0 The Contract 2.1 - 2.4 Page 5 - 6
- 3.0 Management of the Works 3.1 - 3.7 Page 6 - 7
- 4.0 Value Added Tax Page 8 - 9
- 5.0 Site conditions 5.0 Page 9
- 6.0 Substitute products 6.0 Page 9
- 7.0 Definitions and Interpretations 7.0 Page 10 - 11
- 8.0 Terms used in Refurbishment/Alterations 8.0 Page 11 - 12
- 9.0 Documents Provided on Behalf of Employer 9.0 Page 12
- 10.0 Documents to be provided by contractor only if requested by **C.A**
Page 10 - 13
- 11.0 Materials and Work Generally 11.0 Page 13 - 15
- 12.0 Samples/Approvals 2.0 Page 16
- 13.0 Accuracy 13.0 Page 16
- 14.0 Super vision/Inspection/Defective 14.0 Page 16
- 15.0 Working Hours 15.0 Page 17
- 16.0 Security and Protection 16.0 Pages 17 - 18
- 17.0 Protect the Following 17.0 Pages 18 - 19
- 18.0 Temporary works 18.0 Page 20
- 19.0 Building Control approval/Inspections 19.0 Page 20
- 20.0 Services Installation Certificate 20.0 Page 20
- 21.0 Work at Completion 21.0 Pages 20-21

B. Materials and Workmanship Specification of Works pgs. 22 -38

- 1.0 Preparation Works 1.0 (Page 23)
- 2.0 Excavation and Filling - Trench Fill foundations 2.0 (Pages 23 -24)
- 3.0 Other Excavations and Disposal of Materials 3.0 (Page 24)
- 4.0 Concrete Mix trench 4.0 (Pages 24 - 25)
- 4.0b Concrete Floor 4.0b (Page 25)
- 5.0 Brick/Block Cavity Walling 5.0 (Pages 26 -29)
- 6.0 Lintels 6.0 (Page 30)
- 7.0 Beams 7.0 (N/A)
- 8.0 Ceilings 8.0/8.0a Flat Roof Structure.. (Page 30 -31)
- 9.0 Windows and External Doors 9.0 (Page 31 - 32)
- 10.0 Internal Doors 10.0 (Page 32)
- 11.0 New Foul Drainage 11.0 (Page 32 - 33)
- 12.0 Rainwater Drainage 12.0 (Page 33-34)
- 13.0 Internal Works 13.0 (Page 34)
- 14.0 Bathroom 14.0 (Page 34 - 36)
- 15.0 Heating 15.0 (Page 36)
- 16.0 Ventilation 16.0 Electrics (Page 36 - 37)
- 17.0 a. Electrics 17.0 (Page 36)
b. Kitchen (Page 37)
- 18.0 External ramping (Page 37 - 38)
- 19.0 Water Supply 19.0 (Page 38)
- 20.0 Fire and Smoke Protection 20.0 (Page 38)

COLLECTION TOTAL

£25,150

--	--	--

Collection Total

£25,150

APPENDIX A

Please cost and allow for the following items in your tender ONLY if these have not been allowed for elsewhere:

Item	Description	Cost
A1	Supply and Fit high quality Vinyl carpet or Vynly flooring finish to the new bedroom. Allow a supply price of £ 35.00 per m2. Allow for all latex, grippers and underlay TBC	700
A2	<p>Undertake Internal modifications as follows:</p> <p>Form new door opening in the external wall of the existing building to the new bedroom by carefully supporting the existing structure. Use two number PCC lintels 100x50 to form the opening. The opening should be formed to take the size of a 926mm x 2040mm door leaf and suitable frame, this door should be 30min fire door painted in accordance with the spec. Allow for all frames and Architraves.</p> <p>Allow to widen three number doorways within the property, assuming that the wall is 120mm thick solid brickwork with a hard wall plaster render either side, by carefully supporting the existing structure. Use one number PCC lintels 100x50 to form the opening. The opening should be formed to take the size of a 926mm x 2040mm door leaf and suitable frame. Allow for all frames and Architraves.</p>	2800
	TOTAL CARRIED FORWARD TO THE COLLECTION PAGE	3500

Collection Page

A. Preambles & Preliminaries
(Pages 3 - 21)

Page Number A1/4

£.4% project management
commission

Page Number A1/5

£...design practice fees
included

Page Number A1/6

£.....

Page Number A1/7

£.....

Page Number A1/8

£.....

Page Number A1/9

£.....

Page Number A1/10

£.....

Page Number A1/11

£.....

Page Number A1/12

£.....

Page Number A1/13

£.....

Page Number A1/14

£.....

Page Number A1/15

£.....

Page Number A1/16

£.....

Page Number A1/17

£.....

Page Number A1/18

£.....

Page Number A1/19

£.....

Page Number A1/20

£.....

Page Number A1/21

£... 1500

B. Specification of Works
(Pages 22- 40)

Page Number B1/22

£.....

Page Number B1/23

£.....

Page Number B1/24

£.....

Page Number B1/25

£.....

Page Number B1/26

£.....

Page Number B1/27

£.....

Page Number B1/28

£.....

Page Number B1/29

£.....

Page Number B1/30

£.....

Page Number B1/31

£.....

Page Number B1/31

£.....

Page Number B1/32

£.....

Page Number B1/33

£.....

Page Number B1/34

£.....

Page Number B1/35

£.....

Page Number B1/36

£.....

Page Number B1/37

£.....

Page Number B1/38

£.....

Page Number B1/39

£.....

Page Number B1/40

£...25,150

...

C. Works outlined in Appendix A (Pages 41- 42)

£.3500

TOTAL Carried to Form of Tender at the beginning £25,150

D.

rev. by contractor

Enrico Fozzani

Atelier Design & Build
General Contractors
Impresa angloitaliana
VAT 03576990836

ITA tel. (+39) 351 8486944
UK tel. (+44)747 9846162
UKsos (+44) 7568253526

www.atelierdesignandbuild.co.uk
theatelierdesignandbuild@gmail.com
theatelierdesignandbuild@pec.ilcontabile.com



PROPOSED FRONT ELEVATION



PROPOSED REAR ELEVATION

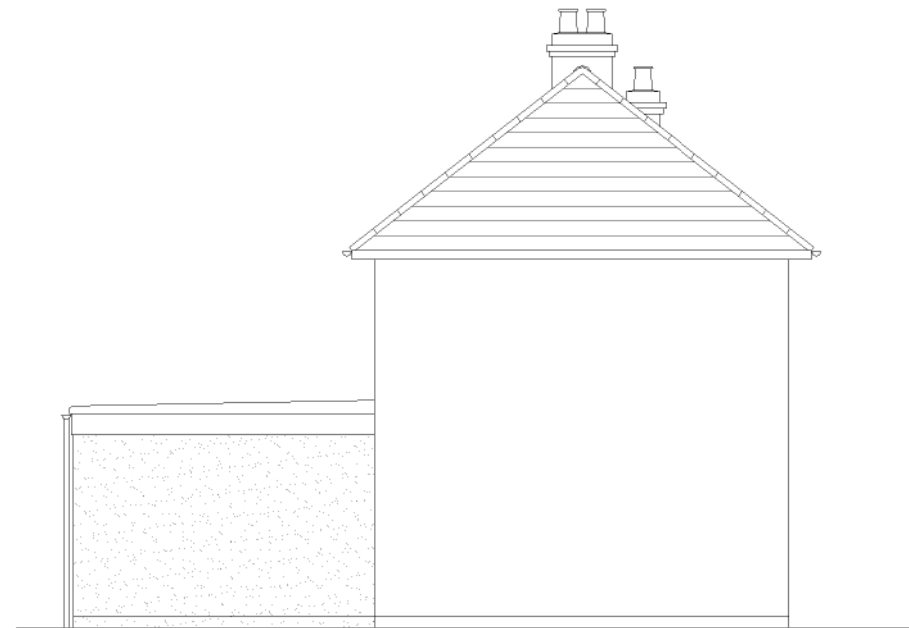
Existing rainwater pipe to be reduced to discharge on to new flat roof

Lead flashing

Window to have trickle ventilators fitted



PROPOSED SIDE ELEVATION



PROPOSED SIDE ELEVATION

NOTE:
The contractor is responsible for all dimensions and levels which are to be taken from site at all times and if required agreed with the client or designer.
No responsibility will be held by the designer on failure of notification.

An Asbestos survey has not been carried out on this property, in the event of finding asbestos this must be treated with caution and tested and removed by a qualified person.

Please note that the contractor will be the principle designer and principle contractor on this contract for all CDM.

Any works undertaken on site prior to receiving Building Regulations Approval from the Local Authority are at clients own risk.

The contractor is responsible for any / all temporary works that may be required and the general safety and stability of the building during removal of existing works and installation of all new structural elements at all stages of the work in strict accordance with the latest Health and Safety at Work and CDM recommendations. Any existing walls or structural elements to be removed must be done so / undertaken only after all necessary props / temporary supports / works required are in place. The removal of walls or beams must be undertaken with great care so as not to de stabilize or damage the existing structure at any time.

A party wall agreement may be required for some aspects of the work. We are not party wall surveyors and have not provided any information on this requirement. The client is advised to seek confirmation if one is required from a Party Wall Surveyor

DO NOT SCALE FROM DRAWINGS EXCEPT FOR PLANNING PURPOSE.

DRAWING REFERENCE: 2720/003/LBH/06

Client: LB HILLINGDON /L PUMPHREY

Property Details:
27 HESA ROAD
HAYES
MIDDLESEX
UB3 2DP

Dwg Date: 18-11-2019

Dwg Title: ELEVATIONS AS PROPOSED

Proposed Project:
SINGLE STOREY EXTENSION TO REAR ELEVATION

Scale Bar 1 : 100 (A3)

0 1m 2m 3m 4m 5m



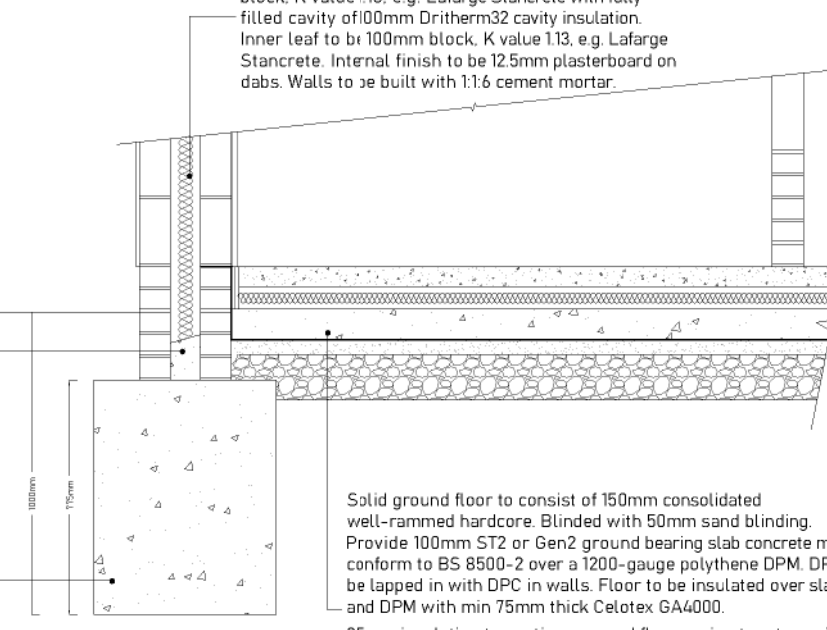
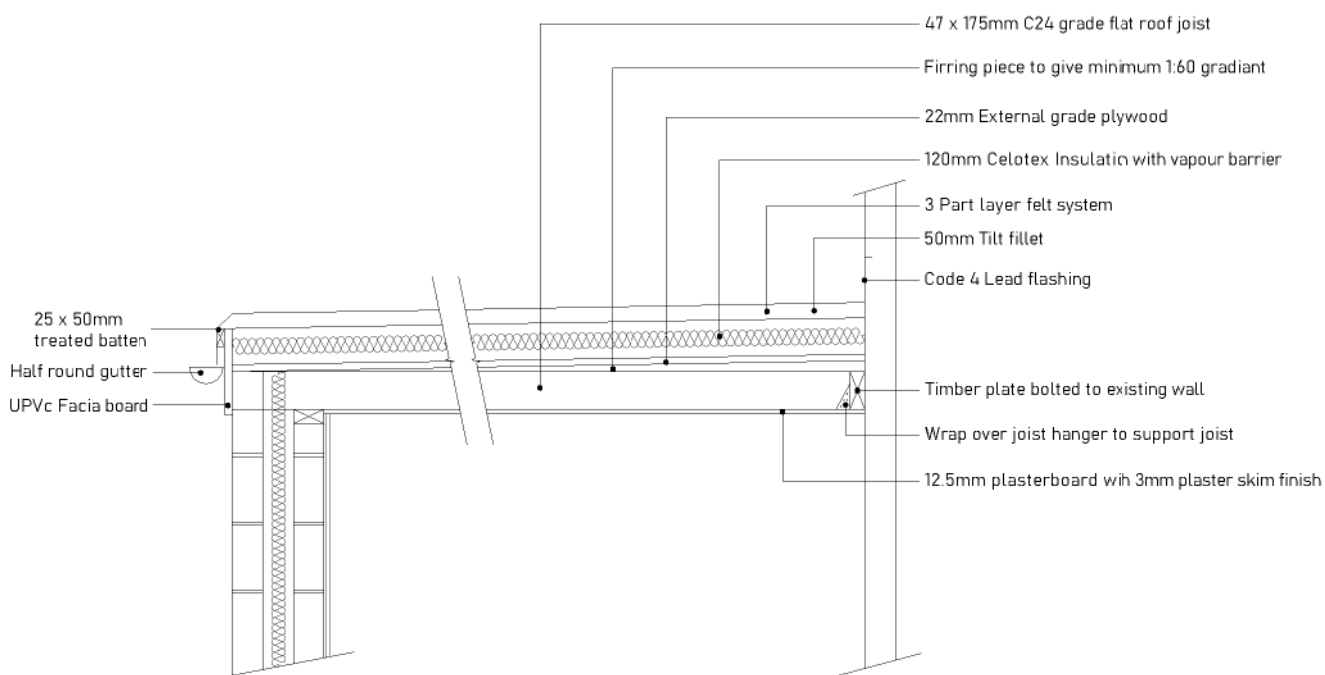
20mm two coa sand/cement render to comply to BS EN 13914-1:2005 with waterproof additive on 100mm block. K value 1.13, e.g. Lafarge Stancrete with fully filled cavity of 100mm Dritherm32 cavity insulation. Inner leaf to be 100mm block. K value 1.13, e.g. Lafarge Stancrete. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1.6 cement mortar.

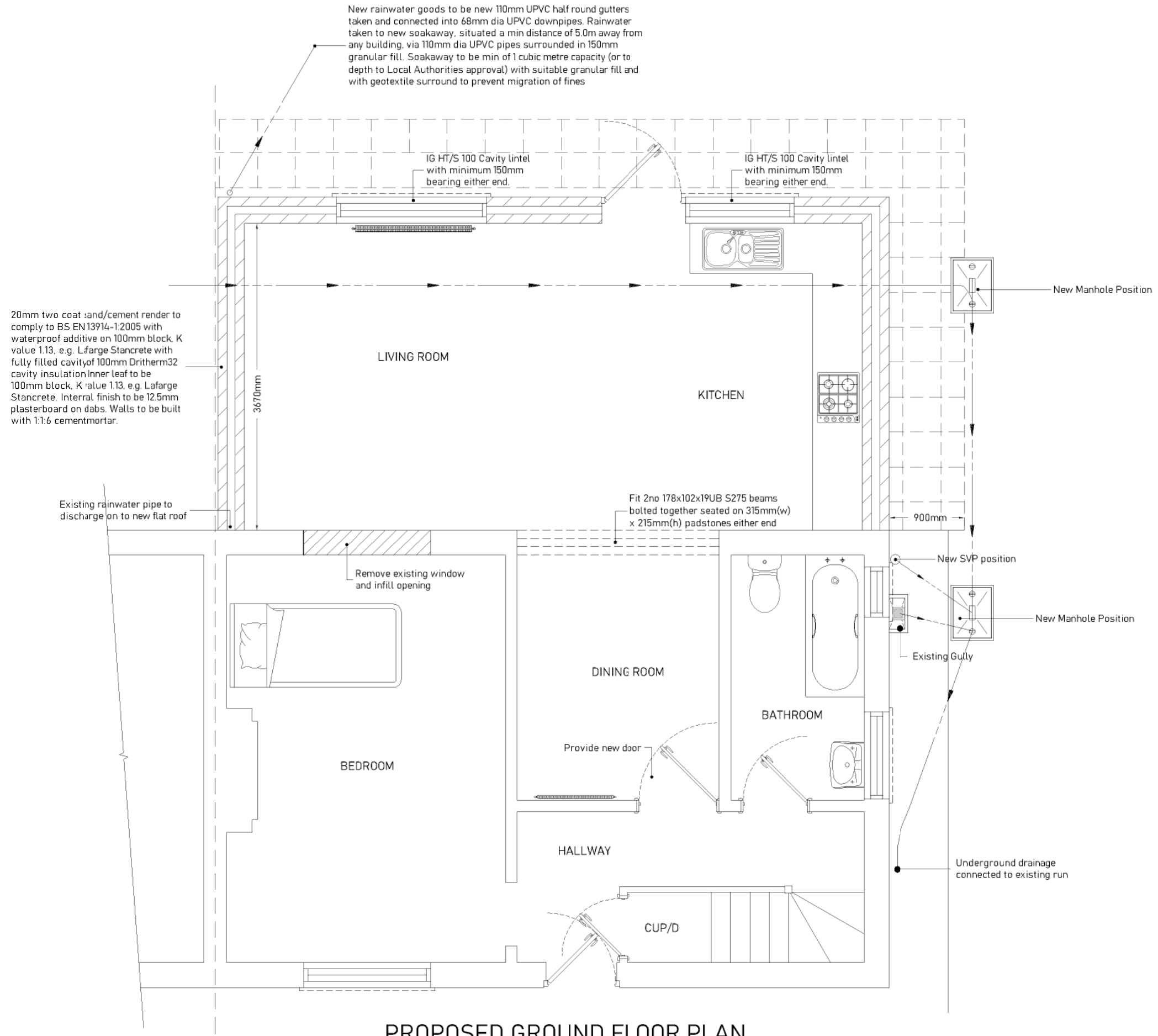
Cavities below ground level to be filled with lean mix concrete min 225mm below dampproof course

Trench Foundation minimum 1000mm deep x 600mm, concrete mix to conform to BS EN 206-1 and BS 8500-2. All foundations to be a minimum of 100mm below ground level

Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over a 1200-gauge polythene DPM. DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 75mm thick Celotex GA4000.

25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, at joints to be lapped 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement





NOTE:
The contractor is responsible for all dimensions and levels which are to be taken from site at all times and if required agreed with the client or designer.
No responsibility will be held by the designer on failure of notification.

An Asbestos survey has not been carried out on this property, in the event of finding asbestos this must be treated with caution and tested and removed by a qualified person.

Please note that the contractor will be the principle designer and principle contractor on this contract for all CDM.

Any works undertaken on site prior to receiving Building Regulations Approval from the Local Authority are at clients own risk.

The contractor is responsible for any / all temporary works that may be required and the general safety and stability of the building during removal of existing works and installation of all new structural elements at all stages of the work in strict accordance with the latest Health and Safety at Work and CDM recommendations. Any existing walls or structural elements to be removed must be done so / undertaken only after all necessary props / temporary supports / works required are in place. The removal of walls or beams must be undertaken with great care so as not to destabilize or damage the existing structure at any time.

A party wall agreement may be required for some aspects of the work. We are not party wall surveyors and have not provided any information on this requirement. The client is advised to seek confirmation if one is required from a Party Wall Surveyor

DO NOT SCALE FROM DRAWINGS EXCEPT FOR PLANNING PURPOSE.

DRAWING REFERENCE: 2720/003/LBH/02

Client: LB HILLINGDON /L PUMPHREY

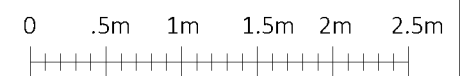
Property Details:
27 HESA ROAD
HAYES
MIDDLESEX
UB3 2DP

Dwg Date: 18-11-2019

Dwg Title: GROUND FLOOR PLAN AS PROPOSED

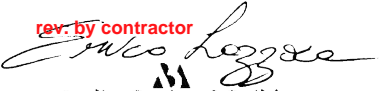
Proposed Project:
SINGLE STOREY EXTENSION TO REAR
ELEVATION

Scale Bar 1 : 50 (A3)



PROPOSED GROUND FLOOR PLAN

Building Regulations Specifications

rev. by contractor


Atelier Design & Build

General Contractors

Impresa angloitaliana

VAT 03576990836

ITA tel. (+39) 351 8486944

UK tel. (+44)747 9846162

UKsos (+44) 7568253526

www.atelierdesignandbuild.co.uk

theatelierdesignandbuild@gmail.com

theatelierdesignandbuild@pec.ilcontabile.com

44 Ash Grove
Headington
Oxford
Oxfordshire
OX3 9JL

Phone: 07860700318

Email: npwalford@outlook.com

Project Details

Single Storey Extension
L PUMPHREY
27 HESA ROAD
HAYES
UX3 2DP

PROJECT REFERENCE 2720/003/LBH/04

BUILDING REGULATIONS NOTES

PARTY WALL ACT

The owner, should they need to do so under the requirements of the Party Wall Act 1996, has a duty to serve a Party Structure Notice on any adjoining owner if building work on, to or near an existing Party Wall involves any of the following:

- Support of beam
- Insertion of DPC through wall
- Raising a wall or cutting off projections
- Demolition and rebuilding
- Underpinning
- Insertion of lead flashings
- Excavations within 3 metres of an existing structure where the new foundations will go deeper than adjoining foundations, or within 6 metres of an existing structure where the new foundations are within a 45 degree line of the adjoining foundations.

A Party Wall Agreement is to be in place prior to start of works on site.

THERMAL BRIDGING

Care shall be taken to limit the occurrence of thermal bridging in the insulation layers caused by gaps within the thermal element, (i.e. around windows and door openings). Reasonable provision shall also be made to ensure the extension is constructed to minimise unwanted air leakage through the new building fabric.

MATERIALS AND WORKMANSHIP

All works are to be carried out in a workmanlike manner. All materials and workmanship must comply with Regulation 7 of the Building Regulations, all relevant British Standards, European Standards, Agreement Certificates, Product Certification of Schemes (Kite Marks) etc. Products conforming to a European technical standard or harmonised European product should have a CE marking.

SITE PREPARATION

Ground to be prepared for new works by removing all unsuitable material, vegetable matter and tree or shrub roots to a suitable depth to prevent future growth. Seal up, cap off, disconnect and remove existing redundant services as necessary. Reasonable precautions must also be taken to avoid danger to health and safety caused by contaminants and ground gases e.g. landfill gases,

radon, vapours etc. on or in the ground covered, or to be covered by the building.

EXISTING STRUCTURE

Existing structure including foundations, beams, walls and lintels carrying new and altered loads are to be exposed and checked for adequacy prior to commencement of work and as required by the Building Control Officer.

LINTELS

- For uniformly distributed loads and standard 2 storey domestic loadings only

Lintel widths are to be equal to wall thickness. All lintels over 750mm sized internal door openings to be 65mm deep pre-stressed concrete plank lintels. 150mm deep lintels are to be used for 900mm sized internal door openings. Lintels to have a minimum bearing of 150mm on each end. Any existing lintels carrying additional loads are to be exposed for inspection at commencement of work on site. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS 8110, with a concrete strength of 50 or 40 N/mm² and incorporating steel strands to BS 5896 to support loadings assessed to BS 5977 Part 1.

For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufactures standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.

FLAT ROOF RESTRAINT

100mm x 50mm C16 grade timber wall plates to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps at maximum 2.0m centres fixed to internal wall faces.

OPENINGS AND RETURNS

An opening or recess greater than 0.1m² shall be at least 550mm from the supported wall (measured internally).

TRENCH FOUNDATION

Provide 750mm x 600mm trench fill foundations, concrete mix to conform to BS EN 206-1 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2010 Building Regulations A1/2 and BS 8004:1986 Code of Practice for Foundations. Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting internal walls to be min 600mm below ground level. Sulphate resistant cement to be used if required.

Please note that should any adverse soil conditions or difference in soil type be found or any major tree roots in excavations, the Building Control Officer is to be contacted and the advice of a structural engineer should be sought.

SOLID FLOOR INSULATION OVER SLAB

To meet min U value required of 0.22 W/m²K

Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over a 1200 gauge polythene DPM. DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 75mm thick Celotex GA4000.

25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement.

Where drain runs pass under new floor, provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain.

Where existing suspended timber floor air bricks are covered by new extension, ensure cross-ventilation is maintained by connecting to 100mm dia UPVC pipes with 100mm concrete cover laid under the extension. Pipes to terminate at new 65mm x 215mm air bricks with cavity tray over.

WALLS BELOW GROUND

All new walls to have Class A blockwork below ground level or alternatively semi engineering brickwork in 1:4 masonry cement or equal approved specification. Cavities below ground level to be filled with lean mix concrete min 225mm below damp proof course. Or provide lean mix backfill at base of cavity wall (150mm below damp course) laid to fall to weepholes.

FULL FILL CAVITY WALL

To achieve minimum U Value of 0.28W/m²K

20mm two coat sand/cement render to comply to BS EN 13914-1:2005 with waterproof additive on 100mm block, K value 1.13, e.g. Lafarge Stancrete with fully filled cavity of 100mm Dritherm32 cavity insulation. Inner leaf to be 100mm block, K value 1.13, e.g. Lafarge Stancrete. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1:6 cement mortar.

DPC

Provide horizontal strip polymer (hyload) damp proof course to both internal and external skins minimum 150mm above external ground level. New DPC to be made continuous with existing DPC's and with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed.

WALL TIES

All walls constructed using stainless steel vertical twist type retaining wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm ctrs at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS 5628-6.1: 1996 and BS EN 845-1: 2003

CAVITIES

Provide cavity trays over openings. All cavities to be closed at eaves and around openings using Thermabate or similar non combustible insulated cavity closers. Provide vertical DPCs around openings and abutments. All cavity trays must have 150mm upstands and suitable cavity weep holes (min 2) at max 900mm centres.

EXISTING TO NEW WALL

Cavities in new wall to be made continuous with existing where possible to ensure continuous weather break. If a continuous cavity cannot be achieved, where new walls abuts the existing walls provide a movement joint with vertical DPC. All tied into existing construction with suitable proprietary stainless steel profiles.

CAVITY BARRIERS

30 minute fire resistant cavity barriers to be provided at at tops of walls, gable end walls and vertically at junctions with separating walls & horizontally at separating walls with cavity tray over installed according to manufacturers details.

WARM FLAT ROOF

To achieve U value 0.18 W/m²K

12.5mm spa solar reflective chippings to achieve aa designated fire rating for surface spread of flame bedded in bitumen on three layer felt to BS 6229:2003 over 120mm Celotex Crown-Up.

Insulation bonded to VCL fixed to 22mm exterior grade plywood on firrings to give 1:60 fall on 47 x 175mm C24 timber joists at 400 ctrs. Ceilings to be 12.5mm plasterboard over vapour barrier with skim plaster finish.

Provide restraint to flat roof by fixing of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.

LEAD WORK AND FLASHINGS

All lead flashings, any valleys or soakers to be Code 5 lead and laid according to Lead Development Association. Flashings to be provided to all jambs and below window openings with welded upstands. Joints to be lapped min 150mm and lead to be dressed 200mm under tiles, etc. All work to be undertaken in accordance with the Lead Development Association recommendations.

ELECTRICAL

All electrical work required to meet the requirements of Part P (electrical safety) must be designed, installed, inspected and tested by a competent person registered under a competent person self certification scheme such as BRE certification Ltd, BSI, NICEIC Certification Services or Zurich Ltd. An appropriate BS7671 Electrical Installation Certificate is to be issued for the work by a person competent to do so. A copy of a certificate will be given to Building Control on completion.

INTERNAL LIGHTING

Install low energy light fittings that only take lamps having a luminous efficiency greater than 45 lumens per circuit watt and a total output greater than 400 lamp lumens. Not less than three energy efficient light fittings per four of all the light fittings in the main dwelling spaces to comply with Part L of the current Building Regulations and the Domestic Building Services Compliance Guide.

HEATING

Extend all heating and hot water services from existing and provide new TRVs to radiators. Heating system to be designed, installed, tested and fully certified by a GAS SAFE registered specialist. All work to be in accordance with the Local Water Authorities bye laws, the Gas Safety (Installation and Use) Regulations 1998 and IEE Regulations.

SMOKE DETECTION

Mains operated linked smoke alarm detection system to BS EN 14604 and BS5839-6:2013 to at least a Grade D category LD3 standard and to be mains powered with battery back up. Smoke alarms should be sited so that there is a smoke alarm in the circulation space on all levels/ storeys and within 7.5m of the door to every habitable room. If ceiling mounted they should be 300mm from the walls and light fittings. Where the kitchen area is not separated from the stairway or

circulation space by a door, there should be an interlinked heat detector in the kitchen.

ESCAPE WINDOWS

Provide emergency egress windows to any newly created first floor habitable rooms and ground floor inner rooms. Windows to have an unobstructed openable area of 450mm high x 450mm wide, minimum 0.33m sq. The bottom of the openable area should be not more than 1100mm above the floor. The window should enable the person to reach a place free from danger from fire.

SAFETY GLAZING

All glazing in critical locations to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1:2011 and Part K (Part N in Wales) of the current Building Regulations, i.e. within 1500mm above floor level in doors and side panels within 300mm of door opening and within 800mm above floor level in windows.

NEW AND REPLACEMENT WINDOWS

New and replacement windows to be double glazed with 16mm argon gap and soft coat low-E glass. Window Energy Rating to be Band C or better and to achieve U-value of 1.6 W/m²K. The door and window openings should be limited to 25% of the extension floor area plus the area of any existing openings covered by the extension.

BACKGROUND AND PURGE VENTILATION

Background ventilation - Controllable background ventilation via trickle vents to BS EN 13141-3 within the window frame to be provided to new habitable rooms at a rate of min 5000mm²; and to kitchens, bathrooms, WCs and utility rooms at a rate of 2500mm²

Purge ventilation - New Windows/roofoflights to have openable area in excess of 1/20th of their floor area, if the window opens more than 30° or 1/10th of their floor area if the window opens less than 30°

Internal doors should be provided with a 10mm gap below the door to aid air circulation.

Ventilation provision in accordance with the Domestic Ventilation Compliance Guide.

RAINWATER DRAINAGE

New rainwater goods to be new 110mm UPVC half round gutters taken and connected into 68mm dia UPVC downpipes. Rainwater taken to new soakaway, situated a min distance of 5.0m away from any building, via 110mm dia UPVC pipes surrounded in 150mm granular fill. Soakaway to be min of 1 cubic metre capacity (or to depth to Local Authorities approval) with suitable granular fill and with

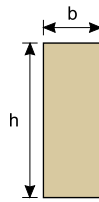
Single Storey Extension

geotextile surround to prevent migration of fines. If necessary carry out a porosity test to determine design and depth of soakaway.

Flat Roof Joist Design (BS5268-2:2002)

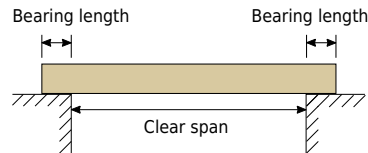
Joist details

Timber strength class	C24
Joist width	$b = 47$ mm
Joist depth	$h = 175$ mm
Joist spacing	$s = 400$ mm



Span

Clear span	$L_{cl} = 3.675$ m
Nominal bearing length	$L_b = 40$ mm
Effective span	$L_{eff} = 3.715$ m



Diagrams not to scale

Modification factors

Depth factor	
Load sharing modification factor (BS5268-2 clause 2.10.11)	

$$K_7 = (300 / h)^{0.11} = 1.061$$

$$K_8 = 1.10$$

Section properties

Mean modulus of elasticity	
Second moment of area	
Z to top edge of timber	
Average density for C24 grade timber (BS 5268-2:2002 Table 8)	
Joist self weight per square metre ($g = 9.81$ m/s ²)	

$$E_{mean} = 10,800 \text{ N/mm}^2$$

$$I = b \times h^3 / 12 = 20,990,885 \text{ mm}^4$$

$$Z = b \times h^2 / 6 = 239,896 \text{ mm}^3$$

$$\rho_{mean} = 420 \text{ kg/m}^3$$

$$F_{joist} = b \times h \times \rho_{mean} \times g / s = 0.085 \text{ kN/m}^2$$

Consider long term loading (0.5 kN/m² dead UDL. K₃ = 1)

Dead load (UDL)

$$F_{\text{dead,udl}} = \mathbf{0.5 \text{ kN/m}^2}$$

Total dead load (dead UDL + joist self weight)

$$F_{\text{dead}} = F_{\text{dead,udl}} + F_{\text{joist}} = \mathbf{0.585 \text{ kN/m}^2}$$

Total load per metre

$$F = F_{\text{dead}} \times L_{\text{spacing}} = \mathbf{0.234 \text{ kN/m}}$$

K₃ (long term load)

$$K_3 = \mathbf{1}$$

Grade bending stress for C24 (BS5268-2:2002 Table 8)

$$\sigma_{\text{par}} = \mathbf{7.5 \text{ N/mm}^2}$$

Permissible bending stress

$$\sigma_{\text{adm}} = \sigma_{\text{par}} \times K_3 \times K_7 \times K_8 = \mathbf{8.754 \text{ N/mm}^2}$$

Bending moment

$$M = F \times L_{\text{eff}}^2 / 8 = \mathbf{0.403 \text{ kNm}}$$

Bending stress

$$\sigma = (M \times 10^6) / Z = \mathbf{1.682 \text{ N/mm}^2}$$

$$\sigma \leq \sigma_{\text{adm}} \text{ (} \mathbf{1.682 \text{ N/mm}^2} \leq \mathbf{8.754 \text{ N/mm}^2} \text{) therefore OK}$$

Grade shear stress for C24 (BS5268-2:2002 Table 8)

$$\tau_{\text{par}} = \mathbf{0.71 \text{ N/mm}^2}$$

Permissible shear stress

$$\tau_{\text{adm}} = \tau_{\text{par}} \times K_3 \times K_8 = \mathbf{0.781 \text{ N/mm}^2}$$

Shear stress

$$\tau = (3 \times F \times L_{\text{eff}} / 2 \times 10^3) / (2 \times b \times h) = \mathbf{0.079 \text{ N/mm}^2}$$

$$\tau \leq \tau_{\text{adm}} \text{ (} \mathbf{0.079 \text{ N/mm}^2} \leq \mathbf{0.781 \text{ N/mm}^2} \text{) therefore OK}$$

Permissible deflection

$$\delta_{\text{adm}} = 0.003 \times L_{\text{eff}} = \mathbf{11.145 \text{ mm}}$$

Bending deflection

$$\delta_{\text{bending}} = (5 \times F \times L_{\text{eff}}^4) / (384 \times E_{\text{mean}} \times I) = \mathbf{2.559 \text{ mm}}$$

Shear deflection

$$\delta_{\text{shear}} = (12 \times F \times L_{\text{eff}}^2) / (5 \times E_{\text{mean}} \times b \times h) = \mathbf{0.087 \text{ mm}}$$

Total deflection

$$\delta_{\text{total}} = \delta_{\text{bending}} + \delta_{\text{shear}} = \mathbf{2.646 \text{ mm}}$$

$$\delta_{\text{total}} \leq \delta_{\text{adm}} \text{ (} \mathbf{2.646 \text{ mm}} \leq \mathbf{11.145 \text{ mm}} \text{) therefore OK}$$

Consider medium term loading (0.5 kN/m² dead UDL + 0.75 kN/m² live UDL. K₃ = 1.25)

Dead load (UDL)

$$F_{\text{dead,udl}} = \mathbf{0.5 \text{ kN/m}^2}$$

Total dead load (dead UDL + joist self weight)

$$F_{\text{dead}} = F_{\text{dead,udl}} + F_{\text{joist}} = \mathbf{0.585 \text{ kN/m}^2}$$

Live load (UDL)

$$F_{\text{live,udl}} = \mathbf{0.75 \text{ kN/m}^2}$$

Total load per metre

$$F = (F_{\text{dead}} + F_{\text{live,udl}}) \times L_{\text{spacing}} = \mathbf{0.534 \text{ kN/m}}$$

K₃ (medium term load)

$$K_3 = \mathbf{1.25}$$

Grade bending stress for C24 (BS5268-2:2002 Table 8)

$$\sigma_{\text{par}} = \mathbf{7.5 \text{ N/mm}^2}$$

Permissible bending stress

$$\sigma_{\text{adm}} = \sigma_{\text{par}} \times K_3 \times K_7 \times K_8 = \mathbf{10.942 \text{ N/mm}^2}$$

Bending moment

$$M = F \times L_{\text{eff}}^2 / 8 = \mathbf{0.921 \text{ kNm}}$$

Bending stress

$$\sigma = (M \times 10^6) / Z = \mathbf{3.839 \text{ N/mm}^2}$$

$$\sigma \leq \sigma_{\text{adm}} \text{ (} \mathbf{3.839 \text{ N/mm}^2 \leq 10.942 \text{ N/mm}^2 \text{) therefore OK}$$

Grade shear stress for C24 (BS5268-2:2002 Table 8)

$$\tau_{\text{par}} = \mathbf{0.71 \text{ N/mm}^2}$$

Permissible shear stress

$$\tau_{\text{adm}} = \tau_{\text{par}} \times K_3 \times K_8 = \mathbf{0.976 \text{ N/mm}^2}$$

Shear stress

$$\tau = (3 \times F \times L_{\text{eff}} / 2 \times 10^3) / (2 \times b \times h) = \mathbf{0.181 \text{ N/mm}^2}$$

$$\tau \leq \tau_{\text{adm}} \text{ (} \mathbf{0.181 \text{ N/mm}^2 \leq 0.976 \text{ N/mm}^2 \text{) therefore OK}$$

Permissible deflection

$$\delta_{\text{adm}} = 0.003 \times L_{\text{eff}} = \mathbf{11.145 \text{ mm}}$$

Bending deflection

$$\delta_{\text{bending}} = (5 \times F \times L_{\text{eff}}^4) / (384 \times E_{\text{mean}} \times I) = \mathbf{5.841 \text{ mm}}$$

Shear deflection

$$\delta_{\text{shear}} = (12 \times F \times L_{\text{eff}}^2) / (5 \times E_{\text{mean}} \times b \times h) = \mathbf{0.199 \text{ mm}}$$

Total deflection

$$\delta_{\text{total}} = \delta_{\text{bending}} + \delta_{\text{shear}} = \mathbf{6.04 \text{ mm}}$$

$$\delta_{\text{total}} \leq \delta_{\text{adm}} \text{ (} \mathbf{6.04 \text{ mm} \leq 11.145 \text{ mm} \text{) therefore OK}$$

Consider short term loading (0.5 kN/m² dead UDL + 0.9 kN live point load. K₃ = 1.5)

Dead load (UDL)

$$F_{\text{dead,udl}} = 0.5 \text{ kN/m}^2$$

Total dead load (dead UDL + joist self weight)

$$F_{\text{dead}} = F_{\text{dead,udl}} + F_{\text{joist}} = 0.585 \text{ kN/m}^2$$

Live point load

$$F_{\text{live,point}} = 0.9 \text{ kN}$$

Total load per metre

$$F = F_{\text{dead}} \times L_{\text{spacing}} = 0.234 \text{ kN/m}$$

K₃ (short term load)

$$K_3 = 1.5$$

Grade bending stress for C24 (BS5268-2:2002 Table 8)

$$\sigma_{\text{par}} = 7.5 \text{ N/mm}^2$$

Permissible bending stress

$$\sigma_{\text{adm}} = \sigma_{\text{par}} \times K_3 \times K_7 \times K_8 = 13.131 \text{ N/mm}^2$$

Bending moment

$$M = (F \times L_{\text{eff}}^2 / 8) + (F_{\text{live,point}} \times L_{\text{eff}} / 4) = 1.239 \text{ kNm}$$

Bending stress

$$\sigma = (M \times 10^6) / Z = 5.166 \text{ N/mm}^2$$

$$\sigma \leq \sigma_{\text{adm}} \text{ (} 5.166 \text{ N/mm}^2 \leq 13.131 \text{ N/mm}^2 \text{) therefore OK}$$

Grade shear stress for C24 (BS5268-2:2002 Table 8)

$$\tau_{\text{par}} = 0.71 \text{ N/mm}^2$$

Permissible shear stress

$$\tau_{\text{adm}} = \tau_{\text{par}} \times K_3 \times K_8 = 1.172 \text{ N/mm}^2$$

Shear stress

$$\tau = (3 \times ((F \times L_{\text{eff}} / 2) + F_{\text{live,point}}) \times 10^3) / (2 \times b \times h) = 0.243 \text{ N/mm}^2$$

$$\tau \leq \tau_{\text{adm}} \text{ (} 0.243 \text{ N/mm}^2 \leq 1.172 \text{ N/mm}^2 \text{) therefore OK}$$

Permissible deflection

$$\delta_{\text{adm}} = 0.003 \times L_{\text{eff}} = 11.145 \text{ mm}$$

Bending deflection from uniformly distributed load

$$\delta_{\text{bending,udl}} = (5 \times F \times L_{\text{eff}}^4) / (384 \times E_{\text{mean}} \times I) = 2.559 \text{ mm}$$

Shear deflection from uniformly distributed load

$$\delta_{\text{shear,udl}} = (12 \times F \times L_{\text{eff}}^2) / (5 \times E_{\text{mean}} \times b \times h) = 0.087 \text{ mm}$$

Bending deflection from point load

$$\delta_{\text{bending,point}} = (F_{\text{live,point}} \times 10^3 \times L_{\text{eff}}^3) / (48 \times E_{\text{mean}} \times I) = 4.241 \text{ mm}$$

Shear deflection from point load

$$\delta_{\text{shear,point}} = (24 \times F_{\text{live,point}} \times 10^3 \times L_{\text{eff}}) / (5 \times E_{\text{mean}} \times b \times h) = 0.181 \text{ mm}$$

Total deflection

$$\delta_{\text{total}} = \delta_{\text{bending,udl}} + \delta_{\text{shear,udl}} + \delta_{\text{bending,point}} + \delta_{\text{shear,point}} = 7.067 \text{ mm}$$

$$\delta_{\text{total}} \leq \delta_{\text{adm}} \text{ (} 7.067 \text{ mm } \leq 11.145 \text{ mm) therefore OK}$$

Design summary

	Permissible	Applied/Actual	Utilisation	Result
Long term load shear stress (N/mm ²)	0.78	0.08	10.1 %	OK
Long term load bending stress (N/mm ²)	8.75	1.68	19.2 %	OK
Long term load deflection (mm)	11.15	2.65	23.7 %	OK
Medium term load shear stress (N/mm ²)	0.98	0.18	18.5 %	OK
Medium term load bending stress (N/mm ²)	10.94	3.84	35.1 %	OK
Medium term load deflection (mm)	11.15	6.04	54.2 %	OK
Short term load shear stress (N/mm ²)	1.17	0.24	20.8 %	OK
Short term load bending stress (N/mm ²)	13.13	5.17	39.3 %	OK
Short term load deflection (mm)	11.15	7.07	63.4 %	OK

Notes

This design is in accordance with BS 5268-2:2002 Structural use of timber - Part 2: Code of practice for permissible stress design, materials and workmanship.

Timber to be covered, this calculation is not to be used for timber which is fully exposed to the elements.

The depth to width ratio of the timber does not exceed 5 and as per the requirements of BS 5268-2 Table 19 there is no risk of buckling under design load provided; The ends are held in position and compression edge held in line, as by direct connection of sheathing, deck or joists.

Notches are not to exceed 0.125 of the depth of the joist and are to be located between 0.07 and 0.25 of the span from the support.

Holes drilled at the neutral axis (centre line) are not to exceed 0.25 of the depth of a joist and are not to be less than than three diameters (centre to centre) apart and are to be located between 0.25 and 0.4 of the span from the support.

Strutting or blocking between joists is required as follows;

- Joist spans up to 2.5m - no strutting required
- Joist spans 2.5m to 4.5m - provide strutting at mid-span
- Joist spans over 4.5m - provide 2 rows of strutting at third span positions

Solid timber strutting to be at least 38mm thick and be a minimum of three quarters of the joist depth.

Proprietary strutting to be used in accordance with manufacturers recommendations.

The joists are to have a minimum end bearing of 40mm.

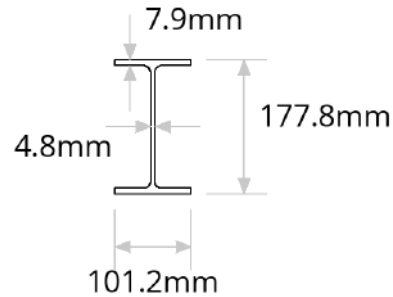
Steel Beam Calculations

Beam 1 Details (Inner Leaf)

178 x 102 x 19 UB S275

Beam effective span length: **2.63 metres**

Width: **101.2 mm**
Depth: **177.8 mm**
Web: **4.8 mm**
Flange: **7.9 mm**
Radius: **7.6 mm**
Mass per metre: **19 kg/m**



Safety factors, restraints & deflection limits

Permanent load safety factor: **1.35**

Variable load safety factor: **1.5**

Beam is fully restrained along its length: **No**

Length between lateral restraints: **2.63 metres**

Variable load deflection limit: **Span/360 = 7.31 mm**

Total load deflection limit: **Span/200 = 13.15 mm**

Load details

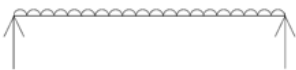


UDL 1: Sloping roof, 30° to 45°

Permanent (dead) load per square metre: **1.41 kN/m²**

Variable (live) load per square metre: **0.75 kN/m²**

Width of load perpendicular to beam, or height of load supported by beam: **1.6 metres**



UDL 2: Ceiling beneath sloping roof

Permanent (dead) load per square metre: **0.3 kN/m²**

Variable (live) load per square metre: **0.25 kN/m²**

Width of load perpendicular to beam, or height of load supported by beam: **1.5 metres**



UDL 3: Timber floor (domestic dwelling)

Permanent (dead) load per square metre: **0.6 kN/m²**

Variable (live) load per square metre: **1.5 kN/m²**

Width of load perpendicular to beam, or height of load supported by beam: **1.5 metres**



UDL 4: Lightweight timber stud partitions, on floor plan

Permanent (dead) load per square metre: **0 kN/m²**

Variable (live) load per square metre: **0.25 kN/m²**

Width of load perpendicular to beam, or height of load supported by beam: **1.5 metres**



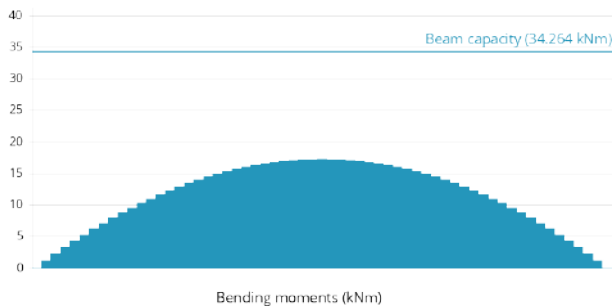
UDL 5: 102.5mm Brickwork + Plaster or render on ONE side

Permanent (dead) load per square metre: **2.25 kN/m²**

Variable (live) load per square metre: **0 kN/m²**

Width of load perpendicular to beam, or height of load supported by beam: **2.8 metres**

Calculations



Bending moments

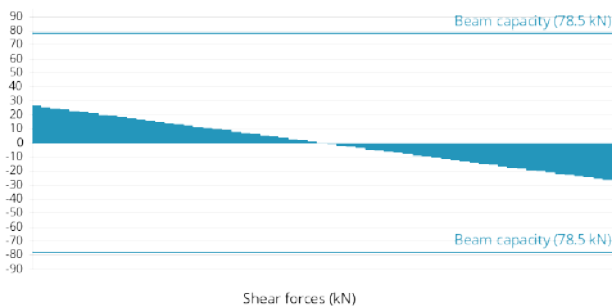
$M_{c,y} = 47\text{kNm} > 17.23\text{kNm}$, Therefore OK

$M_{c,y}$ value from Tata Steel 'blue book' to BS EN 1993-1-1

$M_b = 34.264\text{kNm} > 17.23\text{kNm}$, Therefore OK

M_b value INTERPOLATED from Tata Steel 'Blue Book' to BS EN 1993-1-1

C1 value conservatively taken as 1.0

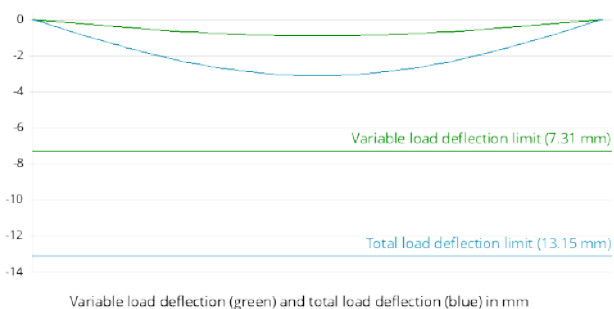


Shear forces

Shear capacity $V_c = 157\text{kN} \times 0.5 = 78.5\text{kN} > 26.2\text{kN}$, Therefore OK

Shear Capacity, V_c from Tata Steel 'Blue Book' to BS EN 1993-1-1

Reduction of moment resistance by high coincident shear force has been avoided by checking that the shear force is no more than 50% of the shear resistance



Deflection

Variable load deflection = 0.92mm < 7.31mm,

Therefore OK

Total load deflection = 3.13mm < 13.15mm,

Therefore OK

Notes

$M_{c,y}$ value from Tata Steel 'Blue Book' to BS EN 1993-1-1

M_b value interpolated from Tata Steel 'Blue Book' to BS EN 1993-1-1

C_1 value conservatively taken as 1.0

Shear Capacity, V_c from Tata Steel 'Blue Book' to BS EN 1993-1-1

Reduction of moment resistance by high coincident shear force has been avoided by checking that the shear force is not more than 50% of the shear resistance

Ends of beam are to be laterally restrained. Ends of beams can be laterally restrained using one of the following methods;

- 1) End of beam built into masonry wall.
- 2) End of beam fixed to a masonry wall.
- 3) End of beam fixed to a column or a beam.

The designer is to ensure that the proposed detail adequately ensures that the end of the beam is laterally restrained.

No allowance has been made for destabilising loads which are outside the scope of these calculations (Destabilising loads would not normally occur in a traditional masonry structure)

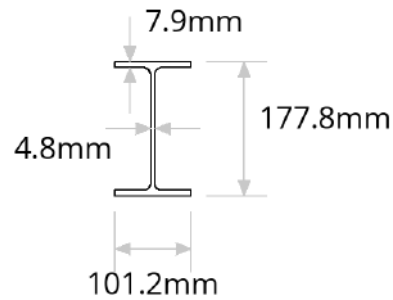
Steel Beam Calculations

Beam 2 Details (External Leaf)

178 x 102 x 19 UB S275

Beam effective span length: **2.63 metres**

Width: **101.2 mm**
Depth: **177.8 mm**
Web: **4.8 mm**
Flange: **7.9 mm**
Radius: **7.6 mm**
Mass per metre: **19 kg/m**



Safety factors, restraints & deflection limits

Permanent load safety factor: **1.35**

Variable load safety factor: **1.5**

Beam is fully restrained along its length: **No**

Length between lateral restraints: **2.63 metres**

Variable load deflection limit: **Span/360 = 7.31 mm**

Total load deflection limit: **Span/200 = 13.15 mm**

Load details



UDL 1: 102.5mm Brickwork + Plaster or render on ONE side

Permanent (dead) load per square metre: **2.25 kN/m²**

Variable (live) load per square metre: **0 kN/m²**

Width of load perpendicular to beam, or height of load supported by beam: **2.8 metres**



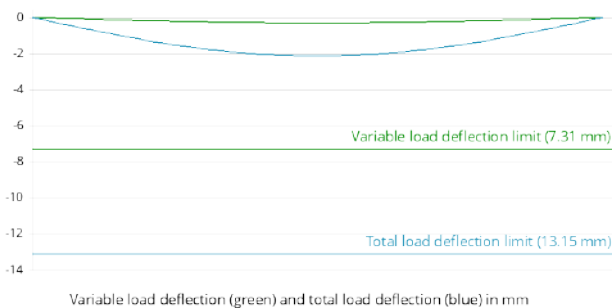
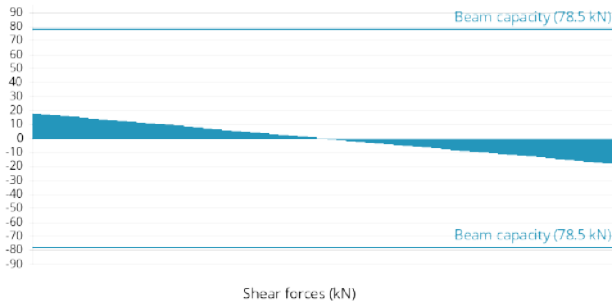
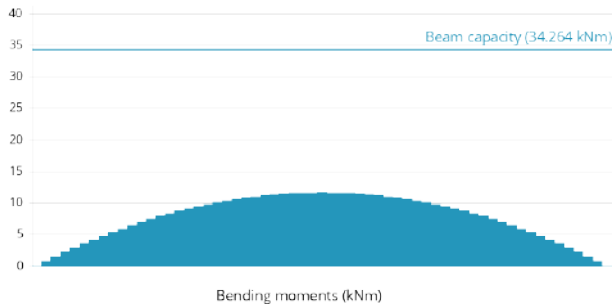
UDL 2: Flat roof, with no permanent access

Permanent (dead) load per square metre: **1 kN/m²**

Variable (live) load per square metre: **0.75 kN/m²**

Width of load perpendicular to beam, or height of load supported by beam: **1.9 metres**

Calculations



Bending moments

$M_{c,y} = 47\text{kNm} > 11.64\text{kNm}$, Therefore OK

$M_{c,y}$ value from Tata Steel 'blue book' to BS EN 1993-1-1

$M_b = 34.264\text{kNm} > 11.64\text{kNm}$, Therefore OK

M_b value INTERPOLATED from Tata Steel 'Blue Book' to BS EN 1993-1-1

C1 value conservatively taken as 1.0

Shear forces

Shear capacity $V_c = 157\text{kN} \times 0.5 = 78.5\text{kN} > 17.7\text{kN}$, Therefore OK

Shear Capacity, V_c from Tata Steel 'Blue Book' to BS EN 1993-1-1

Reduction of moment resistance by high coincident shear force has been avoided by checking that the shear force is no more than 50% of the shear resistance

Deflection

Variable load deflection = $0.31\text{mm} < 7.31\text{mm}$,

Therefore OK

Total load deflection = $2.15\text{mm} < 13.15\text{mm}$,

Therefore OK

Notes

$M_{c,y}$ value from Tata Steel 'Blue Book' to BS EN 1993-1-1

M_b value interpolated from Tata Steel 'Blue Book' to BS EN 1993-1-1

C1 value conservatively taken as 1.0

Shear Capacity, V_c from Tata Steel 'Blue Book' to BS EN 1993-1-1

Reduction of moment resistance by high coincident shear force has been avoided by checking that the shear force is not more than 50% of the shear resistance

Ends of beam are to be laterally restrained. Ends of beams can be laterally restrained using one of the following methods;

- 1) End of beam built into masonry wall.
- 2) End of beam fixed to a masonry wall.
- 3) End of beam fixed to a column or a beam.

The designer is to ensure that the proposed detail adequately ensures that the end of the beam is laterally restrained.

No allowance has been made for destabilising loads which are outside the scope of these calculations (Destabilising loads would not normally occur in a traditional masonry structure)

I2598 - Single Storey Rear Extension at Hesa Road, Hayes, UB3 2DP

Method Statement - construction Single-Storey Rear Extension

27 HESA ROAD HAYES UB3 2DP



Construction Method Statement

Client: Hillingdon PA
Document details:

Project number:	I2598
Issue date:	03 th APRIL 2020
Written by:	Geom. Enrico Lazzara
Reviewed by:	Hillingdon PA
Revisions:	

Contents:

1.00	Introduction	4
2.00	Project overview	4
3.00	Site investigation	N/A
4.00	Site preparation & enabling works	5
5.00	Demolition and strip out	5
6.00	Underpinning	N/A
7.00	Dewatering / Hydrology Summary	N/A
8.00	Below Ground Drainage	N/A
9.00	Construction	5
10.00	Conclusion	6

Appendices:

- a Typical hoarding elevation
- b Architectural Plans

1.0 Introduction

This Method Statement has been prepared for Hillingdon PA in connection with the reconstruction of a Single-Storey Rear Extension at Extension at Hesa Road, Hayes, UB3 2DP

1.01

1.02 This Method Statement is based upon drawings submitted for Planning approval to Royal Borough Hillingdon Council produced by Atelier D&B

1.03 The Structural and Technical Details to be relied upon will be produced for the Client by Atelier Design & Build

1.04 A copy of the Structural Engineering calculations and design drawings will be issued to Council, PA,PP in due course.

2.00 Project Overview

2.01 The subject Property is located within a quiet London street with access for vehicular traffic.

2.02 Parking restrictions exist outside the property and an appropriate application for Suspension will be made to Council.

2.03 The Property has been constructed with existing Lower Ground, Ground, First and Second floor levels and is of facing brickwork external wall construction with slated mansard roof over.

2.04 An application will be required to Council for Storage of materials and appropriate Enclosure Licenses to execute the works.

2.05 Party Wall Notices will be served upon adjoining owners

2.06 There are no obvious structural defects visible upon initial inspection. The Property is in a good general condition as would be expected given its age and construction.

4.00 Site Preparation & Enabling Works

- 4.01** The property is to be occupied during the construction period. Applications will be made to Council for permission to site a builders hoarding to the front of the property.
- 4.02** The hoarding is to have an overall height of 2.4m and to be painted white.
- 4.03** Electrically operated lights are to be fitted to the perimeter of the hoarding together with chevron highway reflectors so that it is clearly visible during the hours of darkness.
- 4.04** A metal skip container is to be located within the hoarding structure for temporary storage of waste material pending its removal and clearance from site.
- 4.05** Temporary water supply and electrical services are to be provided to the hoarding zone and will be retained in a safe condition for the duration of the contract period.

5.00 Demolition and Strip Out

- 5.01** The Existing conservatory with glazed lean-to roof is to be removed.
- 5.02** Provide twin layer dust resistant screening at first floor level to reduce the impact of site works on the unaffected areas of the first floor.

9.00 Construction

- 9.01** The proposed extension is to be constructed from blockwork (inner leaf) and facing brickwork to match that of the existing house.
- 9.02** The proposed extension is to feature a flat roof (with necessary fall for drainage) constructed with timber joists and all necessary insulation and weather proofing in accordance with current building regulations. This new flat roof is to be finished with a high performance roofing felt covering and is to feature a rooflight at its centre.
- 9.03** The floor level and ceiling height within the proposed extension are to line through with the existing house.

10.00 Conclusion

- 10.01** The proposed works will involve the re-construction of an existing single-storey rear extension and will have no measurable impact on the owners of the adjoining property due to the modest size of the proposal and the fact that it is no greater in size than the existing extension.
- 10.02** The proposed works, if executed correctly and in accordance with the appointed Engineer's details and procedures will pose no significant threat to the structural stability of adjoining properties.