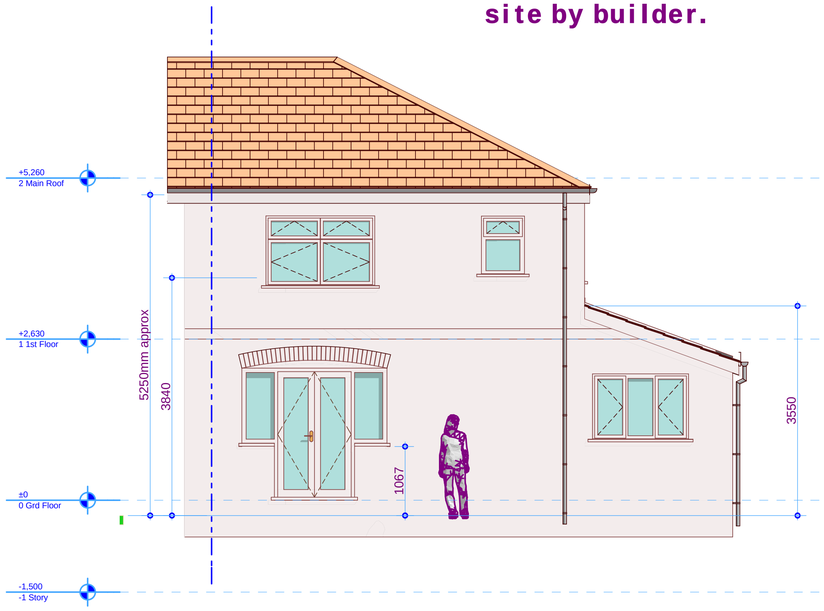
All dims are to be checked on site by builder.



9

Existing Rear Elevation
1:50

PITCHED ROOF
(imposed load max 0.75 kN/m² - dead load max 0.75 kN/m²)
Vented roof - pitch 15-45°
To achieve U-value 0.18 W/m²K
Timber roof structures to be fixed in accordance with BS Codes of Practice no CP3.
Roofing tiles to match existing on 25 x 38mm tanalised sw treated battens on sarking felt to BS747 or relevant BBA Certificate. Supported on 50 x 125mm grade C24 rafters at max 400mm centres max span 3.22m. Rafters supported on 100 x 50mm sw wall plates.
Insulation to be 75mm Celotex GA4000 between rafters and 75mm under rafters.
Provide a cavity of 25mm by fixing batten between plasterboard and under rafter insulation (recommended where insulation under rafters exceeds 50mm).
Maintain a 50mm air gap above insulation to ventilate roof. Provide opening at eaves level at least equal to continuous strip 25mm wide and opening at ridge equal to continuous strip 5mm wide to promote ventilation. Fix 12.5mm foil backed plasterboard (joints staggered) and 5mm skim coat of finishing plaster to the underside of all ceilings using galvanized plasterboard nails.
Restraint strapping - Ceiling joists tied to rafters (if raised collar roof consult structural engineer). 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres, in accordance with CP111 Part 2.

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

Steelwork:

Size/details indicated on plans. Steelwork to have min end bearing of 200mm. Padstone sizes are to be as those indicated on plans.
Steelwork to be surrounded in 2no layers of 12.5mm firelineboard, tape and fill all joints and apply 5mm skim finish for 1/2hr's fire protection.
All steelwork to be painted with 'anti-rust' paint.
Twin r.s.j's to be bolted together at 600c/c's with 20mm 8.8 bolts and spacer tubes at 600mm c/c's with 275x100x10mm plates 6mm fillet welded to the top and bottom flanges spaced at 600mm c/c' s.



3D Render View of Extension.

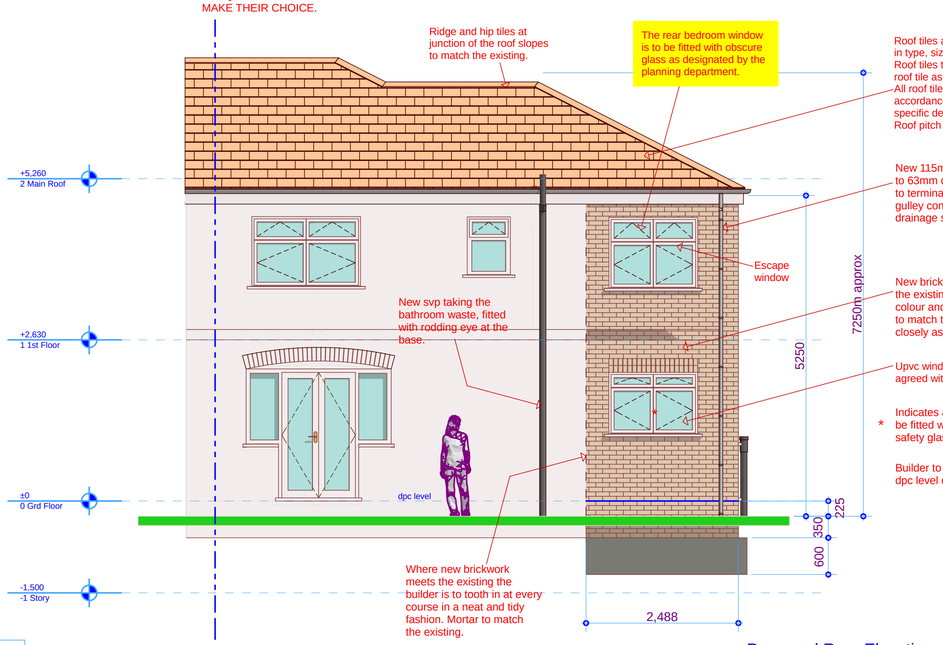
EXISTING STRUCTURE
Existing structure including foundations, beams, walls and lintels carrying new and altered loads are to be exposed and checked for adequacy prior to commencement of work and as required by the Building Control Officer.



3D Render View of Extension.

THE BUILDER IS TO PROVIDE 5 SAMPLES OF FACE BRICKWORK CHOSEN TO MATCH THE EXISTING AS CLOSELY AS POSSIBLE. OWNER TO CONFIRM THE FINAL BRICK TYPE WITH THE BUILDER PRIOR TO ORDERING. MORTAR COLOUR AND TEXTURE TO MATCH THAT USED IN THE FACEWORK OF THE EXISTING DWELLING HOUSE. BUILD SAMPLE PANELS AS REQUIRED FOR THE OWNER TO ACCURATELY MAKE THEIR CHOICE.

Roof Covering:
Roof covering to be laid in accordance with relevant code of practice and manufacturers details, on 38x25mm sc3 treated s.w. Tile battens, 50x50 treated sc3 counter battens, on 'tyvek breathable roofing membrane on rafters nailed to 100x50mm wallplate with 2no 90x4mm nails. Wallplate to be securely strapped to blockwork inner leaf by 1200x30x5mm galvanised mild steel straps at 1800 mm c/c's. Straps taken min.1200mm down wall. For all roof timber sizes see the rafter layout and the ceiling joist layout.



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Proposed Rear Elevation
1:50



3D Render View of Extension.



3D Render View of Extension.

PIPEWORK THROUGH WALLS
Where new pipework passes through external walls form rocker joints either side wall face of max length 600mm with flexible joints with short length of pipe bedded in wall.
Alternatively provide 75mm deep pre-cast concrete plank lintels over drain to form opening in wall to give 50mm space all round pipe: mask opening both sides with rigid sheet material and compressible sealant to prevent entry of fill or vermin.

BEAMS
Supply and install new structural elements such as new beams, roof structure, floor structure, bearings, and padstones in accordance with the Structural Engineer's calculations and details.
New steel beams to be encased in 12.5mm Gyproc fireline board with staggered joints nailed to timber cradles or painted in Nullifire S or similar intumescent paint to provide 1/2 hour fire resistance.

INSPECTION CHAMBERS
Underground quality proprietary UPVC 450mm diameter inspection chambers to be provided at all changes of level, direction, connections and every 45m in straight runs. Inspection chambers to have bolt down double sealed covers in buildings and be adequate for vehicle loads in driveways.

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.

Contractor to ensure the following:

Contractor to visit site prior to submitting tender/final quotation. Include in price all works necessary to clear site prior to commencing works described on detailed drawings.
Contractor to clearly identify items of work not included in tender figure necessary to achieve completion of the works. Contractor to identify any discrepancy between the drawings & works & obtain client approval prior to proceeding. Site to be kept tidy all times, no refuse burned on site & normal hours of working observed.

All work to comply entirely with building regulations latest edition.

All electrical works to be installed & checked by i.e.e.. Registered fully qualified engineer.

All gas supplies & installation by 'gas safe' certified engineer.

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.

General:
The design has required the structural alteration of the existing building fabric as designed by the structural engineer to provide support to roof, floor and masonry construction. Beams will require the use of specialist lifting equipment to ensure the safe handling and positioning of the sections. The contractor will be required to assess the implications on stability prior to commencement on site, and provide the necessary props and shoring to ensure that vertical and lateral support is maintained within the property throughout the project, as discussed and agreed with the structural engineer at all times. If the owner is to remain in residence throughout the project, the contractor may need to take specific precautions to safeguard the owners health and safety, including that of any visitors to site.

The contractor should be aware that this project involves the use of heavy and potentially hazardous materials. In common with all building projects, his operatives should be made aware of the specific dangers of working in this environment, and be provided with the necessary safety equipment and work wear to ensure their health and safety is not compromised.

The contractor should assess the complexity of the scheme and provide a working method statement to ensure that health and safety is not compromised at any stage.

The client's, and contractor's attention are drawn to their responsibilities under the requirements of the *'construction design and management regulations' for* health and safety throughout this project.

Contractor to ensure the following:
Cdm regulations:
The contractor and client are expected to understand their obligations under the cdm regulations and be fully aware of their application. Blueprint cad ltd offer no cdm service and accept no responsibility for owner/builder failure to fulfil their obligations. Builder/owner to confirm with 'hse' whether project is deemed as 'notifiable'. If so an appopriately qualified planning supervisor is required o be employed.
Contractor to comply fully with the construction (design and management regulations) 2000 and the workplace (health and safety) regulations, and advise the health and safety executive and planing supervisor at all applicable stages

Before any appropriate work commences.
The cdm regulations apply to most common building, civil engineering and engineering construction work. You must notify hse of the site if the construction work is expected to either:

- Last longer than 30 days; or
- Involve more than 500 person days of construction work.

RAINWATER DRAINAGE
New rainwater goods to be new 110mm UPVC half round gutters taken and connected into 68mm dia UPVC downpipes

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 manufacture standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.