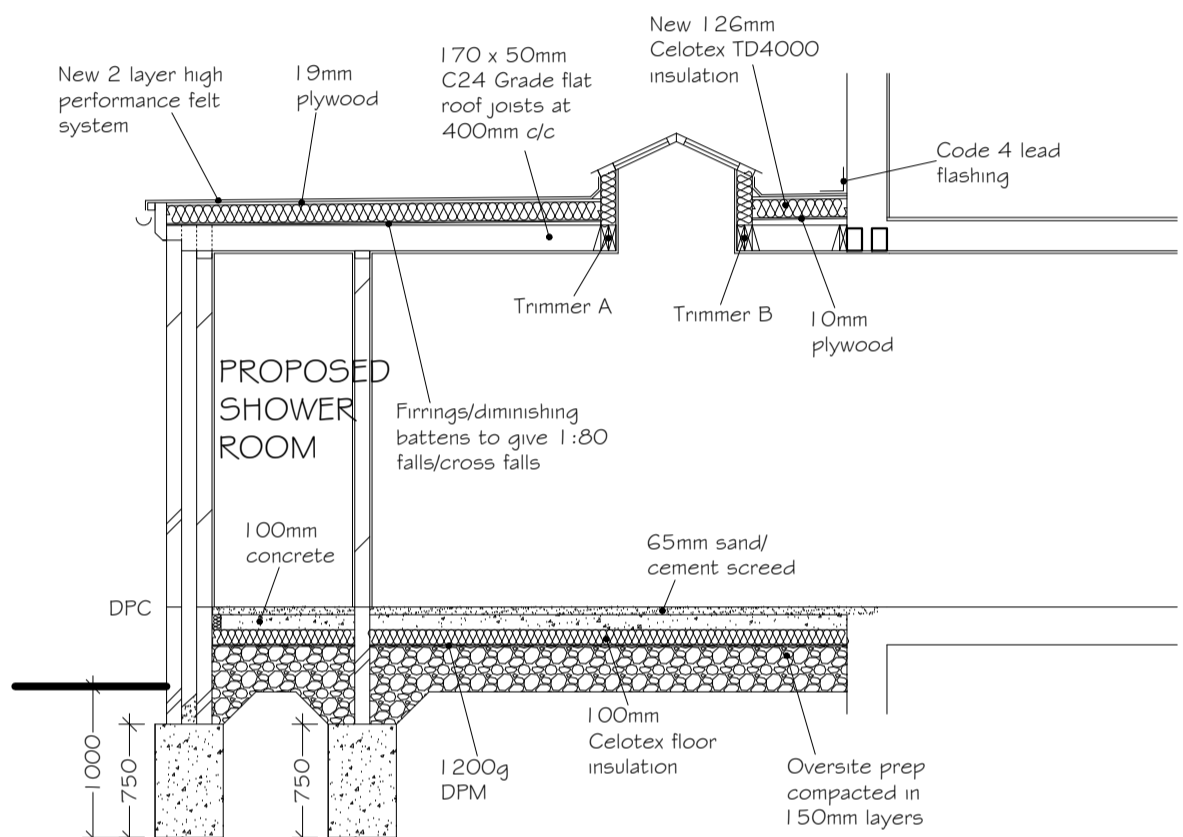
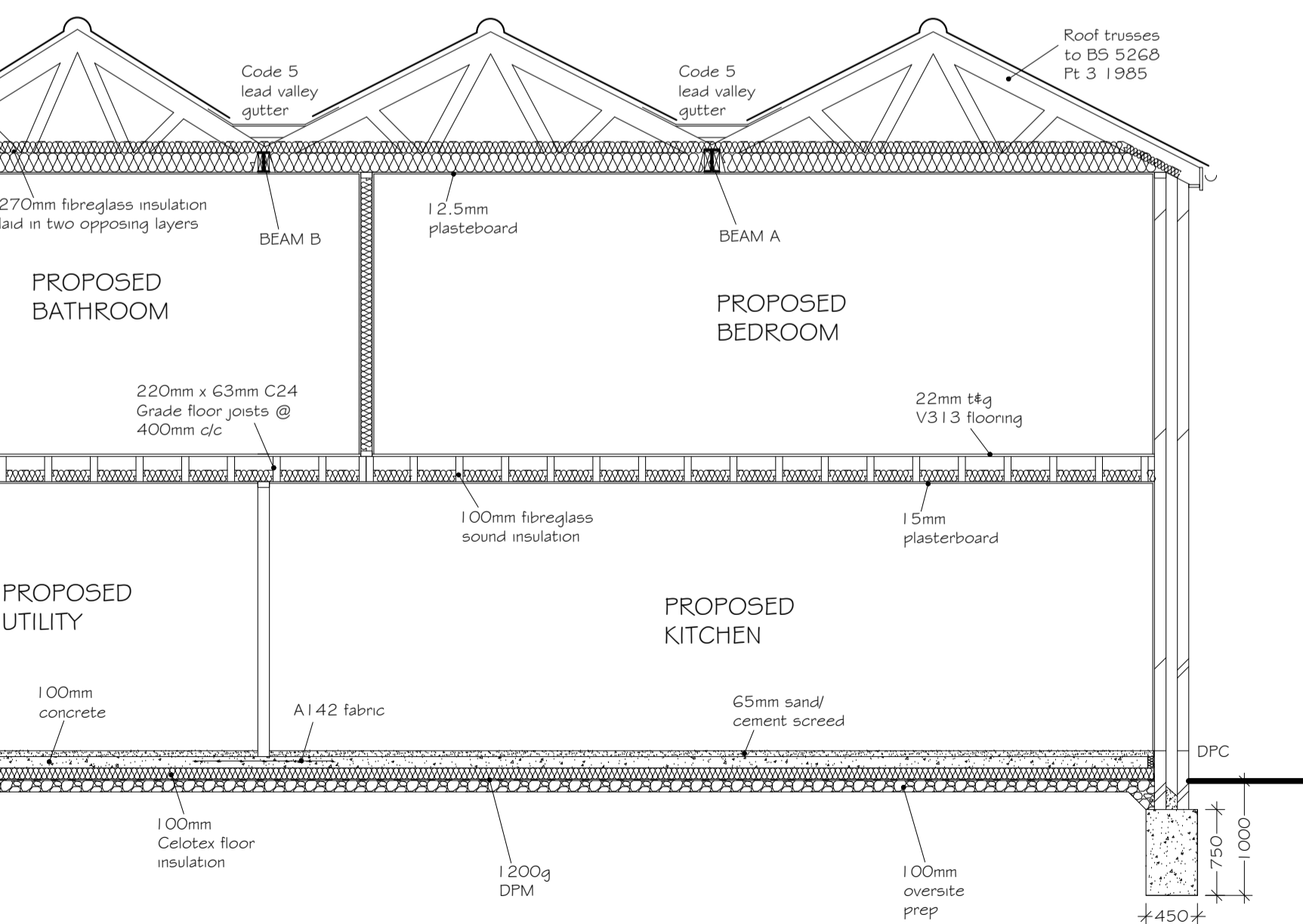


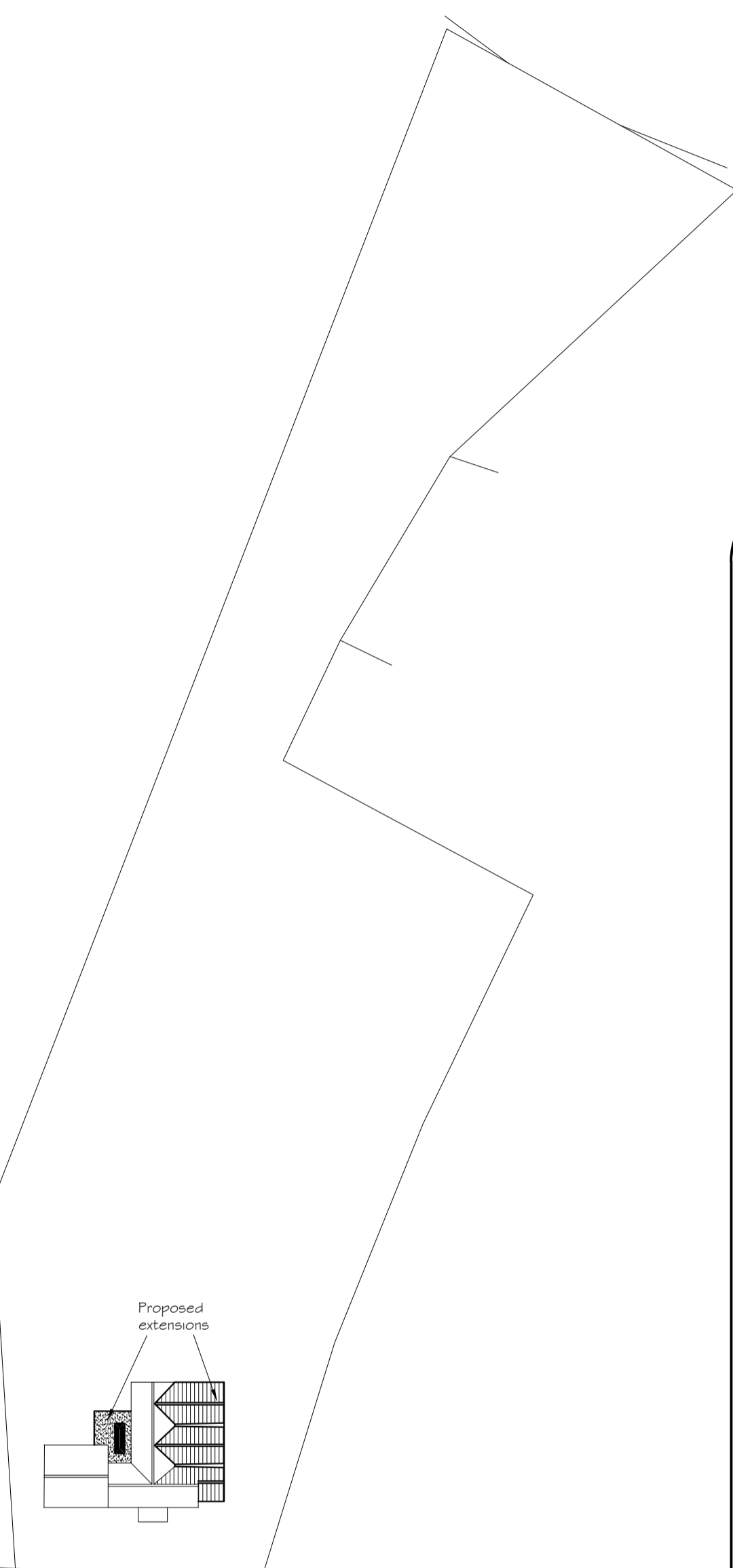
SECTION A - A 1:50



SECTION B - B 1:50



SECTION C - C 1:50



SITE PLAN 1:500

Construction Notes Continued

**LINTELS** - All lintels are to be galvanneal steel lintels in masonry walls, 'catnic' or similar approved, with proprietary cavity tray where required and attaining 150mm end bearings. Lintels in external walls to be clad with 15mm lightweight plaster coat to inside face of lintel. Lintel types as indicated on plan.

**WINDOWS/DOORS** - Provide upvc/powder coated aluminium windows and doors where indicated with trickle vents to give 8000mm<sup>2</sup> (5000mm<sup>2</sup> equivalent area) to each habitable room and 4000mm<sup>2</sup> (2500mm<sup>2</sup> equivalent area) to bathrooms, ensuites, shower rooms, utilities, cloakrooms and kitchens. The windows and doors are to provide a minimum of 5% of floor area in openable window area to each room. The windows and doors are to be double-glazed with sealed units with a 16mm argon gas filled air gap and low-E glass (Emissivity value = 0.05) to achieve a max. 'U' value of 1.8 for doors and 1.6 for windows fitted with draught seals and frames sealed at junction with walls with a flexible sealant. Provide emergency egress windows to new first floor habitable rooms including bedrooms and ground floor rooms where present. Emergency egress windows to have an opening casement fitted to allow an unobstructed area minimum 750mm x 450mm. Bottom of operable area of egress window to be not more than 1100mm above finished floor level. All new internal doors serving accommodation to have a 10mm air transfer gap at bottom.

**SAFETY GLASS** - All glazing in windows within a distance of 800mm above finished floor/ground floor level and glazing in doors and adjacent sidelights within a distance of 1500mm to be safety glass to comply with BS 6206 1981.

**PITCHED ROOF CONSTRUCTION** - Roof construction to comprise of licensed manufacturers prefabricated roof trusses at max. 600c/c all designed, installed and braced in accordance with BS 5262, Pt 3, 1985. Final design layout and truss calculation to be submitted to Building Control for approval prior construction of roof. Trusses fixed to 100mm x 50mm C16 grade timber plates strapped to masonry walls at 1.5m centres and steel beams via joists hangers fixed to timber plates bolted into webs of beams. Roof finish to comprise of roof and ridge tiles (type to match existing and suitable for pitch) fixed to 50 x 25mm s/w treated tie battens fixed on one layer of Proctor Roofshield vapour permeable membrane. Roof to be insulated with 270mm fibreglass quilt laid in two layers 90 degrees to each other 100mm between joists and 170mm over joists. Provide fascia board and soffits to comprise 1 layer of 12.5mm foilbacked plasterboard with taped and filled joints to receive finish to suit clients choice. Form Code 5 lead valleys and valley gutters. Valley gutters formed from 22mm exterior grade plywood fixed to 100 x 50mm timber supports fixed to new trusses giving a fall with lead laid in accordance with guidance from Lead Development Association taken 150mm (measured vertically) up pitched roofs with valley gutters discharging into hopper outlets discharging into new downpipes. Provide cross ventilation in roof structure with eaves ventilation equivalent to a 25mm continuous gap and ridge ventilation equal to a 5mm continuous gap.

**FLAT ROOF AND LANTERN LIGHT CONSTRUCTION** - Glazed element of roof structure (lantern light) to be designed and constructed by specialist manufacturer and to include double glazed toughened glass supported in proprietary glazing bars/weather seals fixed to studwork insulated upstand on edge of structural opening. Double glazed lantern light to have glazing as same specification as windows. Provide 19mm exterior grade plywood on 126mm Celotex TD4000 insulation fixed in strict accordance with manufacturers instructions on 10mm exterior grade plywood on diminishing battens and fittings to give minimum 120mm falls/over falls fixed to 170 x 50mm C24 Grade roof joists at 400mm c/c. Joists to be fixed to lantern light trimmers and existing/new 100 x 50mm wall plates strapped and rawl bolted to masonry walls at 1.5m and 600mm centres. Roof finished externally with 2 layer high performance felt system to BS747 with bonded layer of solar reflective chippings or single ply membrane. Provide fascia board and soffit as indicated. Felt to be dressed over tilting fillets on edge and taken up 150mm on upstands behind Code 4 lead flashings at junctions with lantern light and existing walls. Where roof adjoins existing pitched roof, felt to be taken up rafters 150mm measured vertically. Ceiling to comprise 1 layer of 12.5mm foilbacked plasterboard with taped and filled joints to receive finish to suit clients choice.

**EXISTING GARAGE ROOF UPGRADE** - Existing garage roof to be insulated with 270mm fibreglass quilt laid in two layers 90 degrees to each other 100mm between joists and 170mm over joists. Ceiling to comprise of one layer of 15mm foilbacked plasterboard with taped and filled joints to receive finish to suit clients choice. Roof ventilation to be provided by eaves ventilation equal to a 10mm continuous gap.

**VENTILATION** - Mechanical ventilation to be provided to bathrooms, shower rooms, utilities, kitchens and WC accommodation where present. Mechanical vents to be generally manually operated fans with 15litres/second discharge rate to bathrooms, shower rooms and WC accommodation, 30litres/second to utilities and 60 litres/second to kitchens all ducted directly to outside. Windowless WC and other wet area accommodation fans to be linked to light switch and have a 15 minute overrun. All new internal doors serving accommodation to have a 10mm air transfer gap at bottom.

**STEEL BEAMS** - Provide steel beams in positions indicated on plan bearing on new steel bearing plates and existing masonry wall. Where steel bearing plates indicated provide 100mm wide steel plate (thickness and length as specified in structural design). Where a flush ceiling is required provide timber plates bolted into webs of beams picking up new trusses/roofs joists via joist hangers.

**JULIET BALCONY GUARDING** - First floor french doors to be guarded with 1100mm high toughened/laminated glass balustrading with no gaps exceeding 100mm supported with stainless steel frame.

**SMOKE DETECTION** - Provide mains operated, interlinked smoke detection system in accordance with BS5839-6:2004 permanently wired to a separately fused circuit at distribution board with smoke detectors fitted with a capacitor or battery back up. Smoke detectors to be provided in hall and on each floor level on landings within 7m of doors to habitable rooms. Detectors to be situated at least 300mm from any wall and light fitting.

**BOILER AND HEATING** - Existing boiler to be checked for adequacy for additional heat demand and replaced if necessary with gas fired balanced flue condensing boiler positioned to suit clients choice in agreement with Local Authority Building Control. Boiler installation to be carried out by a registered gas safe engineer with reference made to OGD/MBRE Installation Assessment Procedure for condensing boilers. Boiler to achieve a SEDBUK 2005 rating of 90% or 88% if calculated under SEDBUK 2009. Flue outlet to be minimum 300mm from any opening window or door and guarded externally if within 2m of ground level. Heating system to be adapted and extended to accommodate project and repositioning of boiler if necessary. Radiators to be fitted with thermostatic radiator valves and heating system to be controlled with a programmer and room stat. Hot water cylinder if provided to have factory applied coating of 35mm thick PU foam having a minimum density of 30kg/m<sup>3</sup> ensuring the heat losses from the cylinder comply with the Domestic Building Services Compliance Guide 2013. Hot water supply to the bath to be regulated to ensure it does not exceed a temperature of 48°C with all other hot water supply outlets not to exceed a temperature of 60°C.

**PLUMBING** - All appliances to have pvc waste systems with 75mm deep seal anti-siphon traps with cleaning eyes on all waste pipes on changes in direction. Where indicated basins to have 32mm waste pipes, baths, showers and sinks to have 38mm waste pipes all discharging into new or existing 100mm dia. soil and vent pipes, trapped gullies or 100mm dia. stub stacks. New or extended S/VPs where present to terminate 900mm above any opening within 3m and fitted with a vermin proof cage. Above waste pipes where exceeding permitted lengths (Up to 1.7m for 32mm dia. wastes and 3m for 38mm) to be increased to 50mm dia. where permitted lengths exceeded including common wastes where indicated on plan. Any bends within wet part of a S/VP to be provided with rodding access points. Any waste pipes in excess of 40mm in diameter passing through fire separating walls or floors to be fitted with half hour fire collars where passing through roof/floor or encased in two layers 15mm plasterboard to give half hour fire resistance.

**DRAINAGE** - New drains where indicated to comprise 100mm dia. upvc pipes bedded on and surrounded in 150mm pea shingle. Pipes laid generally to 1:40 falls with a max. of 1:80 falls where a WC is connected at the head of the run. Provide new drains, gullies and upvc inspection chambers in positions where indicated on plan all connected to existing drainage system. Inspection chambers fitted with medium duty covers in gardens and foot paths and heavy duty covers in drives. Inspection chambers in drives to be bedded on and surrounded in 150mm of concrete.

**SURFACE WATER DRAINAGE** - 100mm half round upvc guttering fixed to fascia board and discharging into new or extended upvc downpipes (positions as indicated on plan). New down pipes where indicated to discharge into rain water shoes connected to 100mm dia. upvc drains, bedded and surrounded in 150mm pea shingle, laid to 1:40 fall discharging by priority to 12m cubed soakaway positioned 3m from any buildings or highway. Size of soakaway to be determined by a percolation test in accordance with BRE Digest 365. Where the ground conditions do not permit the use of a soakaway then the surface water should then be discharged into the existing drainage system ensuring all gullies are trapped and drain runs accessible for rodding purposes with the final layout discussed and agreed on site with Building Control.

**ROBUST CONSTRUCTION** - Robust Construction should be utilised throughout the proposed works ensuring the wall insulation is taken 150mm below damp proof course level to overlap with the floor perimeter insulation upstand and meets at eaves level with the roof insulation to maintain continuity.

Construction Notes

**GENERAL SPECIFICATION** - All works are to comply with the current Building Regulations, British Standards and Codes of Practice referred to herein but not specifically mentioned. The works shall be carried out to the full satisfaction of the local authority Building Control Officer, Approved inspector or other body including submission of all necessary notices and payment of fees. All products referred to on the drawing and this specification are to be used strictly in accordance with the manufacturer's recommendations. Before starting any works, all site conditions and dimensions are to be checked and verified by the builder and any discrepancies reported to the Client. Allow to supply and fit all new finishes/fittings to match existing unless otherwise specified, eg. doors/frames, windows, door and window furniture, skirtings, architraves, dado/plinthe rails etc. All softwood used in a structural capacity to be F5C or PEFC certified, min C16 grade (to BS 5268 pt 2, 1991) unless otherwise specified.

**STRUCTURAL DESIGN** - Construction specification to be read in conjunction with any structural calculations relating to project.

**ELECTRICS** - All electronics to be wired in accordance with latest IEE Regulations. Power outlets and light fittings to be located as directed by applicant. Efficient lighting to be specified. The works shall be carried out to the full satisfaction of the local authority Building Control Officer, Approved inspector or other body including submission of all necessary notices and payment of fees. All products referred to on the drawing and this specification are to be used strictly in accordance with the manufacturer's recommendations. Before starting any works, all site conditions and dimensions are to be checked and verified by the builder and any discrepancies reported to the Client. Allow to supply and fit all new finishes/fittings to match existing unless otherwise specified, eg. doors/frames, windows, door and window furniture, skirtings, architraves, dado/plinthe rails etc. All softwood used in a structural capacity to be F5C or PEFC certified, min C16 grade (to BS 5268 pt 2, 1991) unless otherwise specified.

**METERS** - Where existing gas and electric meters/boxes need re-location, applicant should contact relevant service providers and all work to be carried out by nominated contractors.

**HEALTH AND SAFETY** - The client is to be aware that the work shown should only be executed by competent builders who are fully proficient in all forms of safety procedure relating to all aspects of building, demolition and temporary shoring and the safe operation of all plant and equipment including personal protection. The Principal Contractor is responsible for preparing a Construction Phase Health and Safety Plan before commencing work, which shall include all necessary method statements and risk assessments and details of welfare facilities relating to the work shown on the plans and detailed in the specification. This document shall be made available to the Client if requested. For domestic clients, the Principal Contractor is responsible for notifying the HSE if the project is to last more than 30 working days or involve more than 20 workers working simultaneously at any point in the project or exceed 500 person days. Upon completion of the work, if there has been more than one contractor involved in the project, the Principal Contractor shall provide a Health and Safety File to the Client. This shall contain as-built information, details of underground services, any hazardous materials used, health and safety maintenance instructions, maintenance manuals, all certificates and consents and details of any residual hazards that remain.

**PARTY WALL ACT** - Main contractor to ensure that there will be no undermining of foundations to adjacent properties and where applicable new works of any nature that are within 3 meters of adjacent owners property and boundary walls, the main contractor is to ensure all relevant notices are served, and agreements obtained in accordance with the Party Wall Act 1996, before any works are commenced.

**ENCROACHMENT** - No part of the structure above or below ground is to encroach over the boundary of adjacent properties without written consent from owners.

**EXISTING STRUCTURE** - Expose existing foundations and lintels where necessary for inspection by local authority Building Control where additional loading occurs before commencement of works on site.

**FOUNDATIONS** - Final depth and size to be agreed on site with Local Authority Building Control Officer. Foundations shown in 1:50 mix concrete (20mm aggregate) 110mm depth of 1m below finished ground level. Where trees are present in cohesive sub-soils depth to be determined in accordance with NHC Standard Foundation depth advice notes - Chapter 4.2 or Structural Engineer consulted for final design. Drains where present passing through foundations to be sleeved and surrounded in a flexible material with vermin shield to outside face of foundations. Foundation to be provided under all cavity walls, external walls and load bearing internal walls where indicated on plan. Foundations taken below normal levels of any adjacent drains within 1m and public sewers where indicated on plan with Build Over Agreements sought from Anglian Water prior to any commencement of work within 3m of public sewers.

**SUB-STRUCTURE** - Solid walls below ground level where present to consist of solid fletton brickwork to correspond with thickness of walls above dpc including any piers indicated. Cavity walls below ground level to consist of two skins of fletton or similar frost resistant brickwork built off foundation concrete with 100mm cavity between filled to within 150mm of the external ground level with lean mix concrete ensuring cavity extends a minimum of 225mm below dpc level. Both skins are to be tied together with stainless steel wall ties. The double-glazed wall is to be built using fascia and batten over external ground level to dpc. Provide cranked air bricks ducted through oversite preparation to any existing airbricks if present. Ducting to be formed by 2 no. 63mm dia. down pipes laid side by side.

**GROUND FLOOR CONSTRUCTION** - 65mm Sand Cement screed on 100mm oversite concrete on 500 gauge vapour check barrier on 100mm Celotex flooring grade insulation on 1200g polythene DPM on 100mm minimum wet consolidated and blinded hardcore. Provide perimeter insulation upstand (Min. R-value 0.75m<sup>2</sup>KW) on edges of floor slab adjacent external walls and semi-exposed walls. 1200g polythene dpm to have min. 600mm laps and taped joints. DPM to unite with DPC in internal and external walls. Provide A142 reinforcement fabric 1.2m wide in oversite concrete on lines of internal non-load bearing block partition walls and underground drainage/ducting where present. Existing garage floor to be upgraded thermally with construction consisting of 22mm t4g V31.3 flooring laid on minimum 100mm Celotex insulation on 2 coats of R1W liquid dpm painted over existing concrete floor slab. Dpm to unite with dpc's in internal and external walls. NOTE - Where oversite preparation is in area of shower room/living room/harder to be compacted in 150mm layers during build up.

**DAMP PROOF COURSE** - Tyload or similar approved damp proof course to full thickness of all solid walls, individual skins of cavity walls, partitions and gills, all having a minimum of a 100mm sealed lap joints. Continuous damp proof course to be provided around the building/extension and lapped onto the existing dpc's, positioned in all external walls at least 150mm above surrounding ground or paving level.

**WALL CONSTRUCTION** - The masonry walls above dpc level are to be constructed in cavity work comprising of an outer skin of 102mm facing brickwork up to decorative corbelled brickwork cornice and belting; dpm; with 2 coat sand/cement consolidated and blinded hardcore. Provide perimeter insulation upstand (Min. R-value 0.75m<sup>2</sup>KW) on edges of floor slab adjacent external walls and semi-exposed walls. 1200g polythene dpm to have min. 600mm laps and taped joints. DPM to unite with DPC in internal and external walls. Provide A142 reinforcement fabric 1.2m wide in oversite concrete on lines of internal non-load bearing block partition walls and underground drainage/ducting where present. Existing garage floor to be upgraded thermally with construction consisting of 22mm t4g V31.3 flooring laid on minimum 100mm Celotex insulation on 2 coats of R1W liquid dpm painted over existing concrete floor slab. Dpm to unite with dpc's in internal and external walls. NOTE - Where oversite preparation is in area of shower room/living room/harder to be compacted in 150mm layers during build up.

**FIRST FLOOR CONSTRUCTION** - Provide 220 x 63mm C24 grade joists at 400mm centres where indicated. New joists supported off joist hangers in masonry walls. Provide 22mm t4g V31.3 flooring grade chipboard on joists. Ceiling to comprise of min. 15mm plasterboard with filled and taped joints to receive a finish to suit clients choice. Floor voids filled with 100mm fibreglass sound insulation. Provide double joists under 1st floor stud partition walls. Strutting of joists to be provided at mid span where joists span between 2.5 - 4.5m and 2 rows of strutting at one third span positions where span more than 4.5m.

**LATERAL RESTRAINT** - Restraint straps to be provided at 2m c/c at roof level and floors above ground level where present. Straps to span minimum 3 no. joists with noggin between joists on line of straps.

**MOVEMENT / EXPANSION JOINTS** - New masonry walls constructed with movement joints in all accordance with manufacturers guidance and instructions. In general, provide movement joints to facing brickwork at maximum 12m centres and no less than 6m from any corner, aggregate blockwork at maximum 9m centres and lightweight autoclaved aerated blockwork at maximum 6m centres. New work to be tied to existing using Turfix or similar approved superstructure wall brackets. (Fixed in accordance with manufacturers instructions.) Provide stainless steel brackets to external leaf, galvanneal brackets to internal leaf. Provide horizontal ties into new mortar beds at 450mm centres vertically. Provide 10mm 'Compriband' between horizontal ties and seal externally with a 2 part polysulfide sealant.

**ARCHITECTURAL BUILDING DESIGN SERVICES**

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Scale Bars  
0 5m 10m 15m 20m  
1:500  
0 1m 2m 3m 4m  
1:100  
0 1m 2m  
1:50

Project	Proposed two storey side extension, single storey rear extension, garage conversion and alterations		
Drawing Number	21/07/0092	Scales	1:50, 1:100, 1:500
Paper Size	A1	Revisions	A
Drawn	B, B	Drawn	B, B