CONSTRUCTION NOTES

INTRODUCTION
The following specification must be read in conjunction with all relevant project drawings, schedules etc. and is applicable whether specifically referred to or not. It is the responsibility of the contractor to ensure that all their work is in compliance with the appropriate requirements of the relevant Building Regulations and other allied legislation.
All work to be carried out in strict accordance with the current Building Regulations, I.E.E. Regulations, British Standards and Codes of Practice.
All products and materials to be fixed or applied in strict accordance with manufacturers / suppliers instructions and recommendations. All materials to carry Agrement Certificate.
Due regard is to be given to all aspects of Health and Safety of all personnel directly or indirectly associated with the project at all times during the construction phase.
The contractor is to ensure structural integrity at all times.

GENERAL NOTES:

MATERIALS
All materials are to be used and installed in accordance with the relevant manufacturer's instructions and recommendations. The quality of any material shall not be lower than that defined in the relevant British Standard, or that the material has been satisfactorily assessed by an appropriate independent authority.

TIMBER TREATMENT
All softwood timbers to be adequately treated to prevent infestation by the house longhorn beetle in accordance with the current Building Regulations. All structural timbers, external frames, window and softwood cladding shall be treated against fungal attack. All structural timber to be marked DRY or KD and to have stress grade mark.

CONSERVATION OF FUEL AND POWER.
Line lintel soffits and reveals with an insulated lining such as 25mm Gyproc thermal board. Use timber window boards. Any loft hatches are to be insulated and draught sealed. Service ducts and pipes passing through floors and ceilings to be sealed.
The space heating system should include zone, timing and boiler controls as appropriate. Any new hot water storage system should have thermostat timer.

CONSERVATORY SUB STRUCTURE
External wall foundations are to be min. 600 x 300mm nominally at a depth of 1000mm below ground level. Strip foundations to be reinforced top and bottom with BS03 anti-crack mesh dependant on underlying ground conditions and/or if stipulated by Building Control. Foundation excavations to be inspected by the Building Control Officer prior to pouring of footings and final size and depth to be adjusted in accordance with Building Control Officers recommendations. Any internal masonry walls are to be built off 400 x 225mm concrete footings.

CONSERVATORY GROUND FLOOR CONSTRUCTION
100mm concrete floor slab with 1 layer of A142 anti-crack mesh on 120mm Jablite Jabfloor 70 floor insulation on 1200 gauge Dpm on 25mm sand blinding over compacted hardcore consolidated in 150mm max. layers. Dpm to be taken up slab edge and lapped with Dpc in wall. 'U' value through floor to be no greater than 0.22W/M2°C.

EXTERNAL WALL CONSTRUCTION
100mm rendered blockwork, 50mm clear residual cavity, 50mm Kingspan K8 insulation Or 50mm Xtrotherm Thin-R (T&G) insulation, 100mm Medium density blockwork inner leaf. Blockwork to be 7N/sq.mm where indicated. External wall construction (285.5mm overall) to achieve 'U' Value no greater than 0.30W/m2°C.
Thermalite Trenchblock (T&G) may be used below ground or cavity below ground to be filled with weak mix concrete (Gen 1 mix) up to external ground level. Cavity Trays Type W dual-function cavity ventilator/weep hole vent (or similar approved) to be to be provided at 450mm horizontal centres above weak-mix infill and all cavity trays.
Horizontal DPC to be Ruberoid 'Permabit' bitumen polymer (or other equal) to be provided in external walls at 150mm min. above adjoining ground level. Width of dpc to be at least equal to the stonework or blockwork in which it is laid. Dpc's to be laid in continuous lengths on a full even bed of mortar. All laps to be min. 100mm and taped secure. Ensure continuity of dpc with dpm at all points.
FOAMGLAS PERINSUL SL blocks to be laid at the base of blockwork inner leaf at the junction between ground floor slab insulation and cavity insulation to eliminate thermal bridges. End joints are to be closely butted without the use of mortar. Soft mortar to be used above and below the block
Stainless steel cavity wall ties are to be provided at 750mm centres horizontally and 450mm centres vertically. At window and door openings ties are to be provided at 225mm vertical centres and are to be 225mm max in from reveals.
All cavities are to be sealed at head with 9mm Supalux Calcium Silicate board or similar set in mortar. All openings are to be closed with100mm TDI 'Weathercore/f' non-combustible insulated cavity closer or similar approved.

Lintels over door/window openings in external cavity wall to be galvanised pre-formed steel (CATNIC or similar approved). All lintels to be of an appropriate length and have minimum end bearings of 150mm at either end. All lintels to be used to be of an insulated type, to the appropriate length and comply to BS5977 Part 2 1983 and be complete with cavity trays. Lintels over internal openings in masonry walls to be 150mm x 100mm wide reinforced concrete lintels with 2no. R12 bars in bottom. For wall thicknesses over 100mm use multiple concrete lintels to suit.

HORIZONTAL/VERTICAL - DAMP PROOF COURSES GENERALLY
The horizontal damp proof course shall consist of a layer of 2000 gauge polythene damp course to BS 743/8515 adequately lapped at corners and joints, on a mortar bed maintaining a minimum 150mm above adjacent ground level. All joints to be lapped a minimum 150mm. Ensure that damp proof courses do not project into the cavity.

Where external wall cavity is bridged i.e. air brick/ventilator openings and meter cupboard etc. provide polythene cavity trays complete with stop ends over in the external wall with open proprietary perpends. Cavity trays are to project 150mm beyond either side of lintel/opening.

FIRST FLOOR CONSTRUCTION
Floors to be constructed using existing timber joist. Joists to be restrained with 5 x 50mm mild steel straps @ 2000mm centres, screwed to min of 3no. joists and fixed to cavity wall. Provide either solid strutting or proprietary strutting to floor joists at mid point to spans less than 4500mm and one third spacing to greater spans. Floor finish to be 18mm T&G flooring grade floor boards. 2no. joists to be positioned directly below all first floor stud walls and joists are to be bolted together @ 2000mm centres. Insulation to First Floor to be min. 150mm glass fibre insulation laid between floor joists.

All ceilings to be formed in 12.5mm moisture resistant plasterboard with a skim finish. All ceiling and wallboards to be screw fixed galvanised (or rust proof) screws through to ceiling and floor joists and to be finished with a plaster skim finish. Ceiling to run continuously and no bulkheads are to be formed.

ROOF CONSTRUCTION
Reclaimed or conservation tiles to match existing in size, texture and finish to be fixed through to treated softwood battens as required. Marley Eternit (or similar approved) Ventilated Mono Pitch Dry Ridge system to provide 5,000mm2/lin.m. metre free area ventilation of the roof apex with mechanical fixing of ridge tiles. Fixing to be accordance with installation instructions and to meet the requirements of BS 5534: Part 1 for the mechanical fixing of ridge tiles. Continuous 10mm fly-screened eves vent (colour black) to be provided to the perimeter of the eaves soffit boards. Roof space ventilator to be provided around the eaves to allow free-flow of air from the eaves line to the dry-ridge abutment ventilators.
Xtaber Permo vapour-permeable underlay (with 10-15mm drape between rafters) to be installed as per manufacturers instructions under tiling battens. Main rafters to be 47 x 150 C16 grade @ 400 ctrs. Rafters to be secured to the wall plate using proprietary clips. All roof timbers to be designed, braced and installed by specialist roofing subcontractor and to comply with BS5268 part 2.
Insulation to be a continuous single layer of 200mm glass fibre insulation laid between ceiling joists with 100mm glass fibre insulation laid perpendicular across ceiling joists.

All rafters to be seated on 100x75 sw treated wall plates which are to be restrained to inner leaves using 30 x 2.5mm galv. screw fixed vertical restraint straps at 1200mm centres. Where rafters/trusses run parallel to wall provide horizontal restraint straps, 30 x 5mm x 1350mm long (over 3 no rafters) with 100mm long fixing leg to blockwork with 50 x 50 mm s.w. spacers. Ceiling joists to have 30 x 5mm galv straps, over 3 no. joists with twisted and bent ends.

CEILING\JOISTS
Ceiling joists to be 47 x 150 C16 grade @ 400 ctrs and be laterally supported in accordance with BS5268-2: 2002 Table 19. Unless additional lateral support is to be provided, such as fixed boarding to the upper surface of the ceiling joists, the depth to breadth ration of the joists and binders should not exceed 4:1. The minimum bearing at supports for ceiling joists and binders to be the full width of wall plate to accommodate fixings between ceiling joists and rafters, where applicable. Notching or drilling of ceiling joists and binders should not be carried out unless justified by specialist calculation.

GLAZING
New uPVC window and doors complete with opening lights as indicated on elevations to be fitted with double glazed hermetically sealed units incorporating 'A' glass. All glazing to full-height doors and window to be laminated / toughened in accordance with Approved Document N. Final design and material of manufacture of window and doors to be to clients specification. 'U' value through glazed elements to be no greater than 1.8W/M2°C.

ELECTRICAL INSTALLATION
All electrical installation to be in full accordance with BS 7671 and with the latest edition of the IEE wiring regulations, and should be carried out in accordance with current installation techniques applicable to the materials and equipment being used. All cables which are covered or surrounded with thermal installation to be de-rated in accordance with Appendix A of BRE Thermal Installation: Avoiding Risks 2002 Edition.
All down-lighters in ground floor ceiling voids are to be either boxed-in with 12.5mm plasterboard or fitted with an intumescent cover to maintain half-hour fire resistance.
Services and fittings within roof space are to be protected from overheating. Lighting circuit cables to be 1.5sq. mm. minimum where within insulation - all other cable runs to be supported by and clipped to roof timbers and kept clear of insulation.
All light switches are to set at 1200mm above finished floor level and all switched socket outlets are to be set at 450mm above finished floor level.
Any external light fittings should have automatic controls, and/or be capable of only taking lamps having efficacy of greater than 40 lumens per circuit-watt
Provision of additional light fittings, switches and power sockets to be determined on site with the clients agreement.

ENERGY EFFICIENT LIGHT FITTINGS
A minimum of 30% of all new lighting is to be Energy Efficient and these fittings are to be provided as tabled below. Energy Efficient fittings are to be fixed lights that only accept lamps having a luminous efficacy greater than 40 lumens per circuit watt. Such fittings would include fluorescent tubes and compact fluorescent lamps but not GLS tungsten lamps with bayonet cap or Edison screw bases.

New Rooms Created:	No. of Energy Efficient fittings req'd:
1-3 new rooms created	1 no locations
4-6 new rooms created	2 no. locations
7-9 new rooms created	3 no. locations
10-12 new rooms created	4 no. locations

In relation to the above table hall, stairs and landings count as one room but may contain more than one fitting. Energy Efficient light fittings cannot be located in garages, lofts and outhouses. The exact locations of efficiency light fittings to be determined on site and agreed with the client.

SMOKE DETECTOR ALARMS
Self contained hard-wired smoke alarms are to be installed in all circulation areas, including halls and first floor landings, of each storey of the dwelling. Large circulation areas may require two units. Smoke alarm units to be to BS5446: Pt1: 1990 and fitted a min. of 300mm from light fittings and walls. Alarms must be connected to a separately fused mains electricity supply with transformer (if required) and where more than one unit is fitted within a dwelling they must be interconnected. The installation must comply with the IEE regulations.

SPACE HEATING TO EXTENSIONS
Existing central heating system to be de-extended into new rooms in accordance with BS5449. All new radiators to be fitted with thermostatic valves.

VENTILATION TO ROOMS
All windows and glazed doors to have opening lights equivalent to 1/20th of the floor area which they serve. Background ventilation to be equal to 8000 sq.mm. to habitable rooms and 4000 sq.mm. to kitchen and toilet/shower room achieved by vents incorporated in head of window. Kitchen, Toilet/shower room and utility room to receive mechanical extraction at the rate of15 litres/second.

HEATING SYSTEM
Retained boiler to be checked to ensure suitable capacity to accommodate additional heating and hot water loads. New and suitable boiler to be provided if retained unit is not able to deal with additional loads. Heating installations to be installed and certified in strict accordance with current C.O.R.G.I. guidelines. Ventilation to be provided to satisfy boiler ventilation capacity requirements. Boiler to be installed with integral control panel with programmable timer and room thermostat located in hall. All heating pipes to be insulated to satisfy B.S. 5422 and current Building Standards.

All radiators to be sized by heating Engineer and located as per clients instructions and fitted with thermostatic valves. Heating and hot water systems to be commissioned in accordance with manufacturers written instructions and operation and maintenance instructions to be provided for users in accordance with J6.5 and J6.6 of the Building Standards.

Boiler Limitations Label
Boiler to have a limitations label clearly displayed providing information covering and including the following:
Property address, Room name, flue type and limitations, Installers name and contact details together with any other pertinent information deemed necessary for the safe and efficient use of the boiler.

PLUMBING INSTALLATION
Complete installation to be subject to and capable of withstanding testing in accordance with BS 5572:1978. Above ground foul drainage pipe work shall be PVC-u to BS4514.

Pipe work must be designed in accordance with BSS572 and installed to ensure that appliances drain efficiently without causing crossflow, backfall, leakage or blockage. No air from the drainage system shall enter the building. Provide adequate support to lengths of pipework and at junctions and changes in direction.. No branch connection to be within 450mm above foot of soil pipe. All PVC-u pipe work to be to BS 4514. Minimum pipe sizes for sanitary plumbing to be:

WC's, soil pipes	100 mm dia. nom. size
Common pipe waste	50 mm dia. nom. size
Bath, sink	32 mm dia. nom. size
Hand basin	32 mm dia. nom. size
Shower	32 mm dia. nom. size
Overflow	19 mm dia. nom. size

All fittings are to have 75mm deep seal traps. Provide waste for washing machine and dishwashers where applicable. All waste pipes shall be laid to falls (25mm per metre run). All plumbing shall be installed in accordance with manufacturer's instructions.

The maximum lengths of waste pipes shall be as follows:

32mm pipe	1.7m maximum length
40mm pipe	3.0m maximum length
50mm pipe	4.0m maximum length
100mm pipe	6.0m maximum length

Soil and ventilating stacks at 'head' of drain run to be ventilated to the external air via rigid ducting within roof space to terminate via tile or ridge tile ventilator or via piped stack penetration through roof and capped with bird cage grill. Termination to be a minimum of 900 mm above any window head within 3 metres horizontally.

Soil pipes passing through habitable rooms (including kitchens) to be lagged with minimum 50mm sound deadening quilt and with 2 no. layers of 12.5mm plasterboard in 38 x 38mm softwood framing. Access and nodding eye fittings to be provided to ensure all pipework is accessible as required. Pipework laid between joists to be adequately supported. Underground pipes with less than 750mm ground cover shall be insulated. All rising mains to be insulated.

UNDERGROUND DRAINAGE - ACCESS POINTS
Access points in the form of rodding eyes, access fittings, inspection chambers or manholes to be provided at the following points:

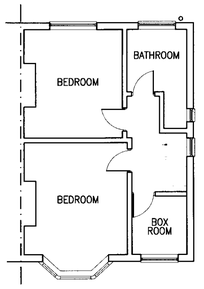
(a) On or near the head of each drain run
(b) At a bend and at a change of gradient
(c) At a change of pipe size
(d) At a junction unless each run can be cleared from an access point

Traditional brick built manhole 1200x750mm (internal size) with a 600x600mm cover for invert levels up to 2700mm deep. Manhole to comprise of 215mm thick engineering bricks on 150mm thick concrete base fitted with anti-crack mesh. Half round vitrified clay channels and swept branches to discharge outgoing pipe and at a slope of 1 in 12. Benching should be rounded at the channel with a radius of at least 25mm. Provide step irons or vertical ladder for depths exceeding 1000mm.

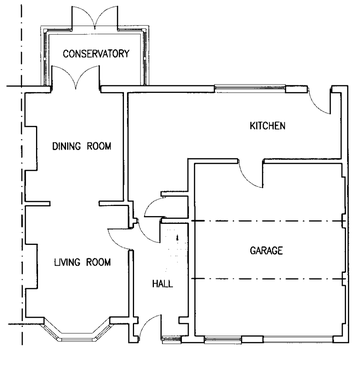
Manhole and/or inspection chambers should be removable non-ventilating covers to be either cast iron or pressed steel and be of suitable strength. Covers inside buildings shall have mechanically fixed airtight covers.

RAINWATER GOODS
100mm wide cast-iron semi circular section gutters to match existing to be laid to falls of 1:600 discharging into 68mm diameter circular section downpipes discharging to trapped back inlet gullies with rodding access. Gullies to discharge into 100mm surface water drains laid to falls at a min. of 1:80 and discharging into existing surface water sewer. All connections to be in accordance with Building Control officers recommendations.

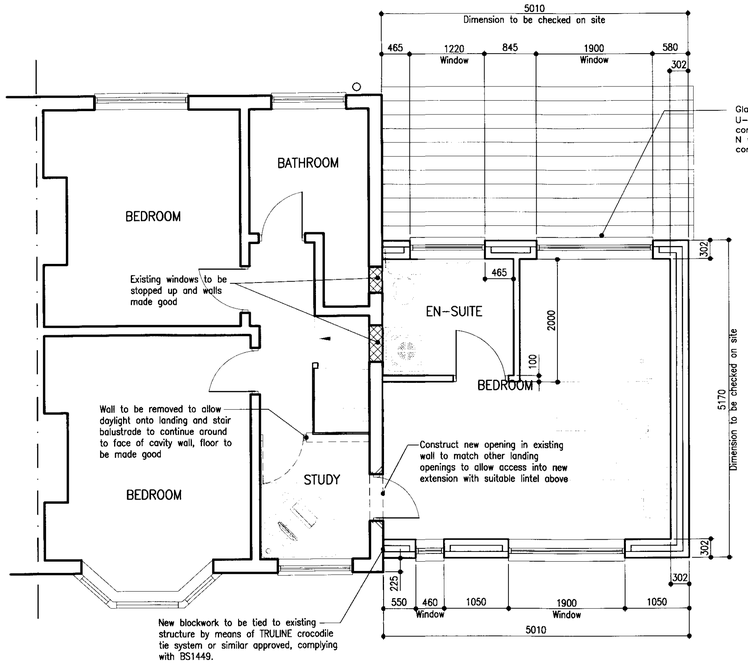
UNDERGROUND DRAINAGE - DRAIN RUNS
Drains running under a building to be surrounded in 100mm of granular fill. On sizes where excessive subsidence is possible additional flexible joints should be protected. Where the top of the pipe is within 300mm of the underside of the slab concrete encasement shall be used and be integral with slab. Provide flexible movement joints of compressible board at each pipe junction when encasing in concrete. Where a drain runs through a wall or foundation provide a length of pipe (as short as possible) but with the joints as close as possible to the wall/foundation faces (within at most 150mm) and connected on each side to rocker4 pipes with a length of at most 600mm and flexible joints. Provide a pre-stressed concrete lintel over with minimum 150mm end bearings, with 50mm clearance all round pipe and the opening is to be masked with rigid sheet material to prevent the ingress of vermin or fill.



EXISTING
FIRST FLOOR LAYOUT



EXISTING
GROUND FLOOR LAYOUT

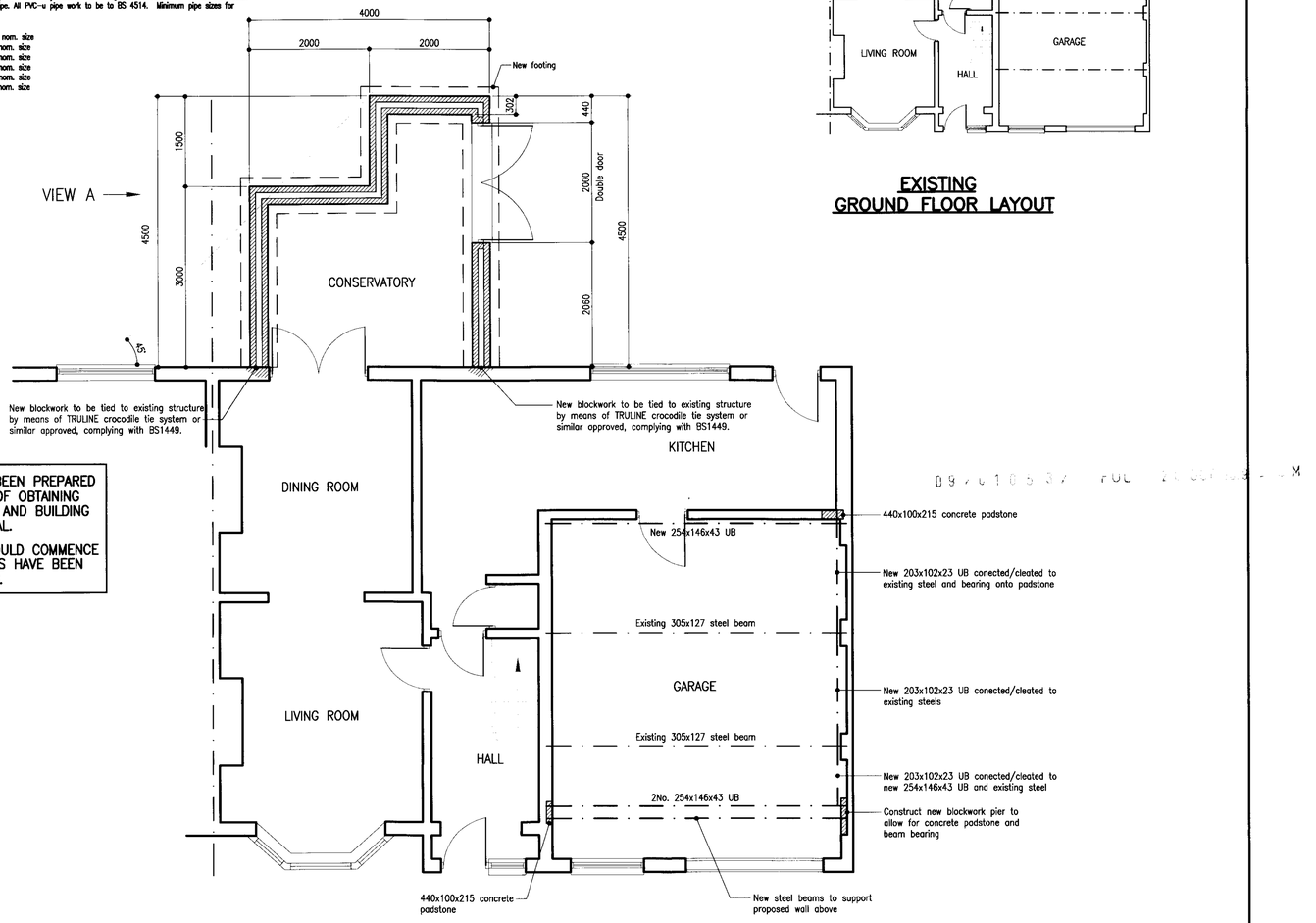


Glazing to all new window frames to achieve a U-value of 1.8 W/m2k - manufacturer's confirmation of compliance with regulations L and N will be required by the local authority building control deptment on completion of the works

THIS DRAWING HAS BEEN PREPARED FOR THE PURPOSE OF OBTAINING PLANNING APPROVAL AND BUILDING REGULATION APPROVAL.

NO SITE WORKS SHOULD COMMENCE UNTIL ALL APPROVALS HAVE BEEN RECEIVED IN WRITING.

PROPOSED
FIRST FLOOR LAYOUT



PROPOSED
GROUND FLOOR LAYOUT

Client	Mr & Mrs Rowe	Scale	1:50, 1:100
Project	Proposed 1st Floor Side Extension and Conservatory to 153 Uttoxeter Road, Blythe Bridge	Size	A1
		Date	May 2009
Drawing	Floor Plans of Proposed Extension and Conservatory (Sheet 1 of 3)	Drwg. No.	Rowe/09/01

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ORIGINAL SHEET SIZE A1 [840x594]