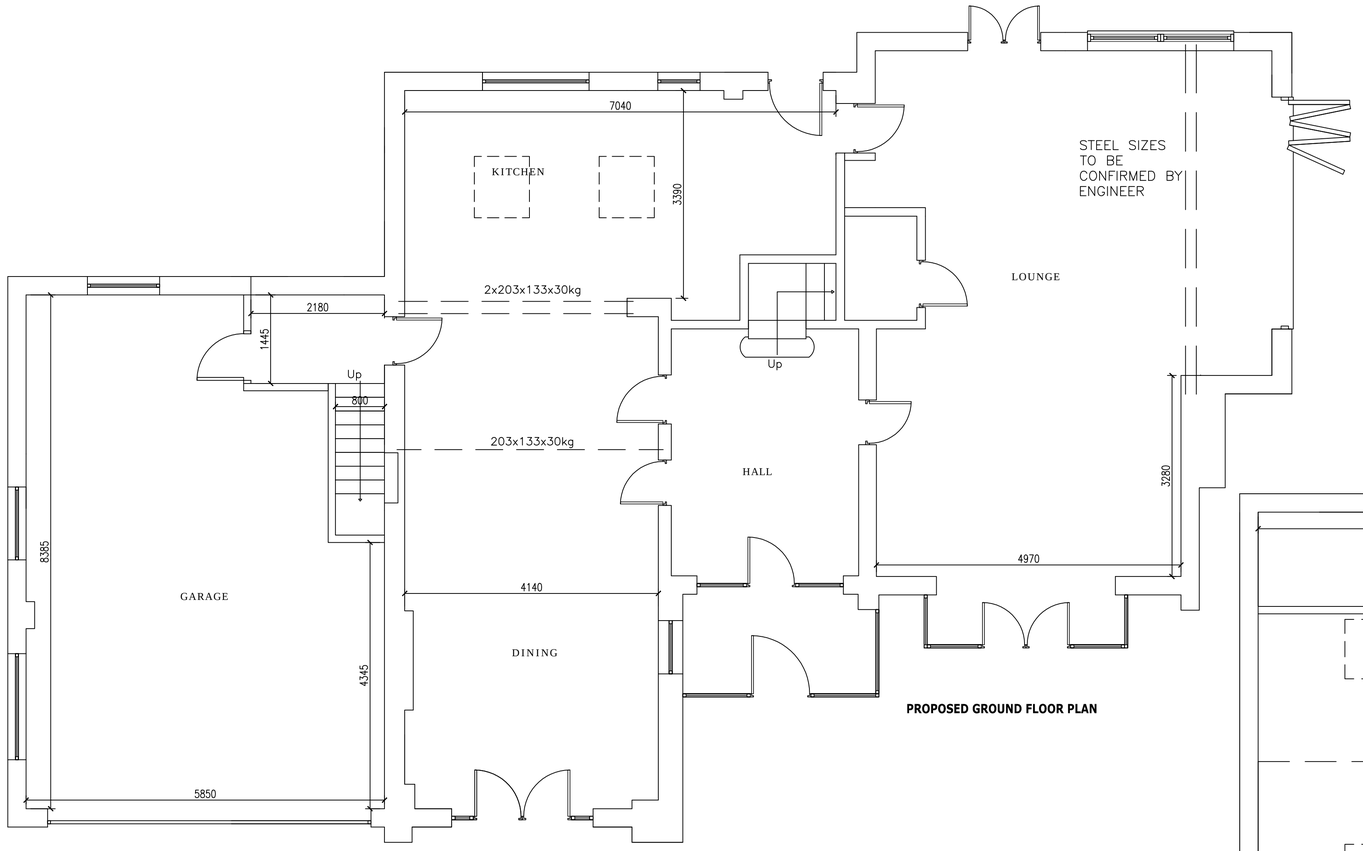
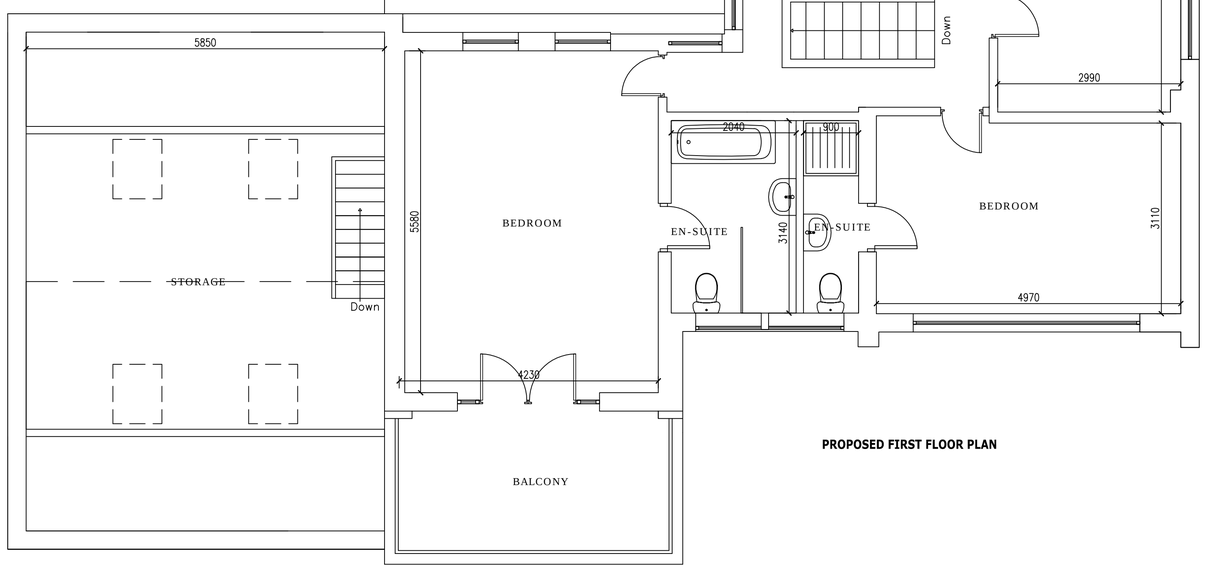


PROPOSED GROUND FLOOR PLAN



PROPOSED FIRST FLOOR PLAN

FOUNDATIONS

NOTE. It is recommended that a trial hole be dug on the site to determine the existing footing type and ground conditions Where an existing single storey structure is to be built on top of, the inspector will want to see the base of the footing to determine its suitability to carry additional loading so that any design work can proceed if required during the early stages of the application process, building control records may also assist with local area knowledge, e.g. shallow mining etc. Builder should initially allow for a strip footing of 900mm minimum dig, client should note that anything over this as required by the inspector will incur extra design and building costs.

All Foundations to be excavated to a depth to satisfy building control inspector, any excavations within 1m of new or existing drains to be taken below invert level, any new or existing drains passing through substructure to be protected by bridging lintels. Footings to be traditional concrete strip type minimum dimension 600mm x 600mm thick and are not to be eccentrically loaded without further design work. Builder must check that footing type has been approved and no additional design work is required before pouring concrete. New walls to be built to ensure minimum 150mm toe to concrete footing each side.

STRUCTURE

Walls to be cavity construction throughout. Outer leaf to be of facing stonework and render finish to match existing style with 100mm fully insulated cavity with Dritherm 32 or 34. All cavity work to be tied with ties at rate of 5 per m2 and at every course at openings. Inner leaf to be medium density blocks with plasterboard and skim finish achieving 0.28 W/m2k U value. External return corners always to be a minimum of 665mm. Cavity only to be closed at openings with insulated closer. Ensure all new work is tied to existing using proprietary galvanised jointing system or by bonding into existing and ensure saw cut with dpc between where new cavity meets existing structure. Cavity below ground level to be filled with weak mix concrete to within 150mm of ground level and dpc to be provided to both leaves at min 150 mm above ground level linked to dpm/radon barrier with appropriate cavity tray and weep holes, if a timber floor is used then a cavity tray should be used over the airbrick liners. Ensure blocks used below ground level are trench blocks.

STRUCTURAL CHANGES

Any structural work is to be to structural engineer's details for foundations, retaining walls, roof timbers, beams, padstones and support nibs to ensure overall stability and work should not commence until these have been specifically approved by the Building Inspector Neil Marsden 07712 324945. Builder should check with agent that calculations have been approved and room designs and layouts should not proceed until builder has checked that the structural changes have been approved. All steelwork is to receive ½ hour fire protection and any beams above 3m span should be bolted together at either end and mid-span. Provide all necessary temporary supports when demolishing walls and check for any services which should be made safe. Steels should be placed as high as possible subject to direction of first floor joists and always be a minimum of 2000mm finished headroom.
Calculations will be submitted a minimum of 14 days prior to installation of steels and builder should contact agent in time to allow this.

ROOF

Form new roof to rear single storey elements using 150mm x 50mm rafters at 400mm centres which should be doubled up to sides of velux windows. Fix noggins between rafters at any gable ends to hold straps to retain brickwork verge, straps to be fixed to noggin and turned down cavity two per end elevation.
Use a 150mm x 50mm wall plate bolted to the rear wall with M10 anchor bolts at 600mm centres and a 100mm x 75mm wall plate to the new inner leaf blockwork fixed down with straps at 1m long positioned at 1.8m centres and plugged and screwed to the blockwork. Ensure a good birds mouth cut to the rafters over the top and bottom wall plates.
Form new roof to two storey extension using 100mm x 50mm rafters and 250mm x 50mm hip boards with dragon ties to corners positioned over the wall plate and notched under the base of the hip board. Use 150mm x 50mm ceiling joists at same centres as rafters.
Use 2 steel beams size 178mm x 102mm x 19kg positioned at ceiling level to take 100mm x 100mm timber props braced both ways to support the side purlin at either end intersection with the hip boards.
Cover roofs with Tyvek or similar breathable felt draped between rafters with 38mm x 25mm tanalised battens and tiles/slate to match existing fitted to manufacturer's instructions for pitch and exposure conditions.

Insulate all sloping roof/ceiling areas with 100mm insulation between the rafters and 52.5mm insulated plasterboard across the rafters. Insulate loft spaces with 300mm mineral wool laid in two layers in opposite directions.
Use code 5 lead flashings/valleys in all situations.

WINDOWS, DOORS AND VENTILATION

All new windows are to be of UPVC material and the bi-fold doors are to be aluminium colour finished to client's choice. Areas of windows shown are to meet customer's specifications the total area of glass should not exceed 25% of the extended floor area plus any existing external openings enclosed. Windows to meet current regulations for safety and thermal insulation i.e. max U value 1.6W/m2K (1.8 W/M2K for doors). Therefore to be double glazed units (4mm) minimum 16mm air gap (argon filled) with low 'E' coating (e.g. Pilkington's K glass), ensure safety glass e.g. toughened is used to areas below 800mm and in all doors and glass panels adjacent doors and clearly marked to BS 6206. Ensure trickle ventilation of 8000mm2 is achieved and 1/20th floor area openings to habitable rooms and 4000mm2 to non-habitable rooms.
First floor habitable rooms should provide means of escape with a minimum opening area of 0.33m2 with a minimum width of 450mm and a maximum cill height from finished floor level of 1100mm.

FLOOR

The whole of the ground floor extension footprint is to receive a 2000 gauge membrane as a radon barrier taken across the cavity below ground level laid on sand blinding on well compacted hardcore.
The floor is to be a well compacted hardcore, sand blinding dpm/radon linked to dpc, 120mm insulation board with off-cuts to the perimeter and a concrete floor slab finish with A142 mesh trowel finished or with self levelling compound or a 60mm semi dry screed depending on the choice of floor finish to enable final floor finish to be level with existing.
Alternatively (subject to builder preference and inspectors approval depending on ground levels and ability to achieve ventilated sub-floor) use a timber suspended floor using 150mm x 50mm joists at 400mm centres with mid-span strutting and sleeper walls, if needed with dpc on top positioned to ensure maximum joist span is 3m (2.5m if 125mm x 50mm joists used) and 120mm suspended insulation with 225mm x 150mm air grates at 1.8m centres, knock through any existing air grates to improve air flow.
First floor is to be 200mm x 50mm SC3 grade joists at 400mm centres with mid-span strutting and 100mm mineral wool sound insulation with lateral restraint straps fixed to sides of joists and turned down cavity at 1800mm centres. Where additional mid-span beams are required these will be provided.

SUNDRY

Finish all new walls and ceilings with 12.5mm plasterboard and skim finish and all necessary joinery items. Provide thermostatic valves to any new radiators (system should be surveyed by qualified engineer to ascertain suitability for additional output).
Provide at least 25% of all new light fittings as energy efficient light fittings capable of only receiving low energy bulbs (LED's)

The client should be consulted reference socket outlets, lighting requirements and radiator positions in order to support new room layout and usage and also any exterior lighting as required.
Allow for outside tap and also security PIR lighting and decorative lighting to rear as required.
Where applicable separate wc's to have 6 litre extract fan operated with light switch and with 15 minute over-run. Bathrooms, en-suites and utility rooms to have 15 litre extract fans and kitchen areas to have 60 litre extract fan or 30 litres if over a cooker.

STOOTHING WALLS

Ensure joists are doubled up under positions of any stoothing walls where running parallel and in all trimming situations i.e. stairs and around any chimneys (allow 50mm clearance).
Walls to be 75mm x 50mm timber framing with min 25mm sound deadening insulation and double 12.5mm plasterboard and skim both sides.

Any boiler work is to be carried out by a GAS SAFE registered person to comply with Part J for all installation and flue outlet positions.

FIRE PROTECTION

Provide mains wired inter-linked smoke alarm with battery back-up in landing positions shown marked (SA).

DRAINAGE

Existing system appears to be combined, upon further inspection if separate system is found then this should be maintained records may show water authority adopted drains due to age of property building control will advise and any water authority conditions should be complied with. At an early stage builder should discuss with inspector feasibility of taking all additional surface water to a soakaway of 1m3 at a point 5m from the building. Suggested connections are shown, system to be investigated on site and all runs and final connections to be agreed with building inspector. Use 100mm upvc gutters and 75mm fall pipe. Use 100mm upvc gutters to drain to 75mm fallpipes all securely fixed draining to existing mains system. All new underground drainage runs should use 100mm underground plastic drainage laid on pea gravel to a 1:40 fall, all new rain water gullies entering combined system should do so via traps

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PROPOSED REPLACEMENT ROOF OVER GARAGE AND REPLACEMENT OF CONSERVATORY WITH EXTENSION

FOR
MR STEVE SMITH

HIGH NOON
HOLLINBERRY LANE
WORTLEY
SHEFFIELD S35 7EL

DRAWING 4 OF 4

PROPOSED FLOOR PLANS
SCALE 1:50 AT A1
DATE: OCTOBER 2016