

Demolish
Carefully take down existing fence, gate, decking and prepare site for new building works.

Unsuitable Material
Vegetable matter such as turf and roots should be removed from the ground to be covered by the building at least to a depth to prevent later growth. The effects of roots close to the building also need to be assessed. Where mature trees are present on sites with shrinkable clay the potential damage arising from ground heave to services and floor slabs and over site concrete should be assessed. Reference should be made to BRE Digest 29822. Where soil and vegetation type would require significant quantities of soil to be removed. Reference should be made to BRE Digest 24123 and 24224, and to the FBE (Foundation for the Built Environment) Report 125

Foundations
Foundations to cavity walls to be constructed of concrete common brickwork up to 150 mm below ground level with Class B engineering brickwork from GL to DPC level externally and concrete block work internally. Walls built off 750 x 200 (C20 mix-20N/mm²) concrete strip foundations, at min depth of 1000mm, to suit local ground conditions. If the ground is found to clay the footings are to be in accordance with NHBC guide 'Building Near Trees' and to be in accordance with BS 8004, BS 5837 and to satisfaction of the Local Building Authority Inspector. Precast concrete lintels to be laid over all openings for drainage and service runs with minimum 150 mm end bearing onto adjacent brickwork. Concrete mixes to be in accordance with BS 8000 - 2.1 All existing foundations and structure that is to take new structural loading to be exposed for Building Control to determine its suitability. Strengthen and underpin existing as necessary to carry new loads. Where new foundations arise in vicinity of old foundations, existing should be fully grubbed up and new foundations laid at least the same depth. Foundations to be taken down to the invert level of any drain passing within 1 metre RC lintels to be provided over drains passing through walls Walls below ground level to be filled with concrete cavity filling to 225mm below lowest dpc level.

Steelwork
Steelwork as noted on plan to comply with BS449, BS5950. Steel beams to bear onto concrete pad stones min 300mm x 250mm x 150 mm deep. Where only 100mm seating is possible (i.e. no pier provided) steel to sit at minimum 450mm long x 100mm wide x 150mm deep concrete spreader padstones. Piers and walls under steel to be made good and rebuilt if formation of openings has weakened structure or structural engineer has specified a rebuild Steel beams e.g. r.s.j's, u.b's etc to be coated in zinc primer prior to building in and to be spaced and bolted together via M12 bolts and spacers of 1000mm c/s (unless specified by structural engineer). Fully encased in 2 layers of 12.5mm plasterboard and skim support on 50x50mm cradle to give half hour fire resistance (web flanges packed with mineral wool reduce cold bridging). Lintels over openings to be proprietary insulated. Steel lintels e.g. Gatic or I.G. etc - lintel type to be suitable for loading configuration and spans. Install d.p.c. cavity tray over with stop ends and weep holes at 900mm c/s - min 2 per cavity tray. Where 100mm cavity is specified ensure correct lintel is used to deal with wider cavity. All lintels to be encased in plasterboard to give half hour fire resistance. Internal door openings (max 1200mm opening size) to have 150mm x 100mm reinforced concrete lintels over or proprietary steel lintels of approval manufacture - min 150mm end bearing.

Cavities
To be continuous with existing closed at eaves with Superlux

Cavity fill
Weak concrete mix. Fill in cavity to be 225 mm below DPC level

BRICK PIER + CONC
PADSTONE TO ALL NEW
STEEL BEAMS
ALL CAVITIES TO BE
CONTINUOUS

NEW STEEL OVER

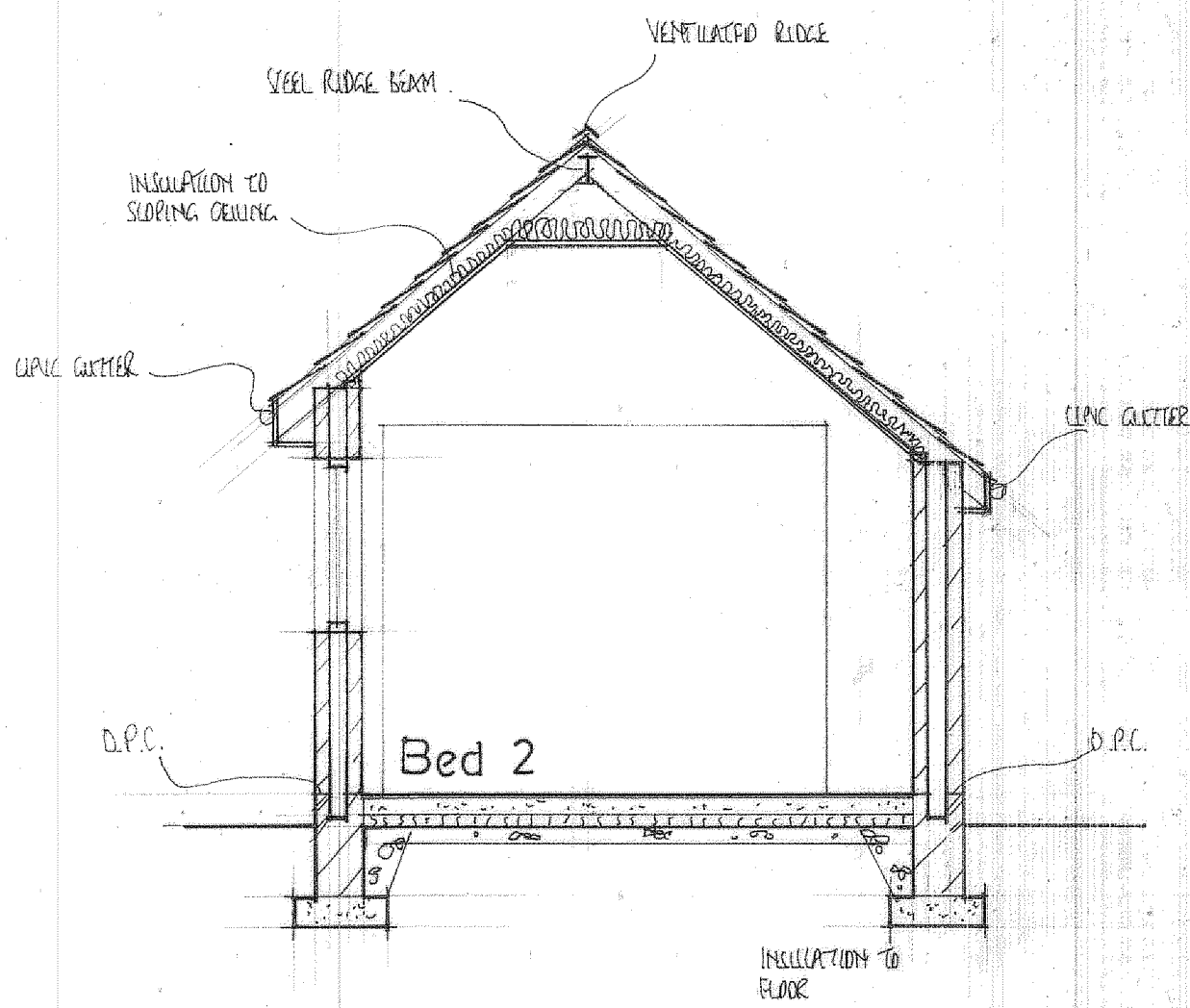
ALL CAVITIES TO BE
CONTINUOUS

NEW DRAIN TO
CONCRETE

UPVC GUTTER +
TRAPPED GULLY

SOPKAWHART

GROUND FLOOR PLAN



SECTION A-A

Cavity Walls Block/Block full fill (U value 0.18W/m²K)
External wall construction: 100mm plasmar aglite blockwork (K render finish) compressive strength of 5N/mm². 150mm full fill cavity with 150mm Drithern 32 Ultimate, installed in strict accordance with the manufacturers instructions. 100mm inner blockwork Plasmar Fibolite - 0.18 W/m²K (7Nmm²) internally finished with 12.5mm plasterboard on dabs with min 10mm airspace. External wall achieved 'U' value of 0.188W/m²K. Blockwork used below dpc level to comply with BS 6073, to be sulphate resistant and have compressive strength not less than 7N/mm². Density exceeding 1500kg/m³. Stainless steel wall ties to be used to new cavity walls - refer to general notes for spacing. Walls should be properly bonded and solidly put together with mortar.

Damp Proofing
Horizontal dpcs to be provided to wall min 150mm above finished ground level (stepped where necessary). A minimum of 4 courses of engineering brick is to be provided below dpc level to prevent spalling damage
D.P.M.s to lap both new and existing dpc's
Where a former external wall becomes internal as a result of the extension - check condition of existing H.D.P.C.s and clean out existing cavities. Where defective - insert injection dpc. Limelite cement based water proof rendering to be used to finish off walls (not gypsum based plaster).
Any air bricks covered by proposal to be duct-ed via 100mm dia ducts to new external walls and insert telescopic air bricks sleeved with cavity trays over to connect to outside air
Provide cavity trays in brickwork over solid brickwork, junction of cavity and solid brickwork and over solid piers to avoid cavity bridging. Where cavity wall adjoins cavity brickwork, provide extra vertical wall ties 225mm vertical centres and insulated vertical dpc to cavity bridging

Cavity closer
Insert Isofoam XCC insulated cavity closer to all new openings all as document I 2013. Width and fixing to suit opening

Cavity tray
Provide cavity trays of Yeovil limited 'e' straight cavity tray with no. 4 lead apron flashing over roof, min up-stand 75 mm dressed down 200 mm over roof tiles. Flashing to be taken min 35 mm under cavity trays lead wedged and pointed up. Provide weep holes

New opening
Break open existing walls at ground floor level from floor to ceiling to form new opening as shown and provide and insert R.S.J.s as indicated on plan, over supported both ends concrete padstones. Make good brickwork, plaster, floor and ceiling. Include for all necessary temporary support during execution of the works. See structural engineer's details and calculations. Upon exposing brickwork if any discrepancies appear regarding steelwork notify architect for reassessment. Note any changes or costs incurred are solely the responsibility of the client. Assumptions on existing construction have been made with the limited information obtained during survey.

Ground Floor Construction (U value 0.18W/m²K)
Leveling screed finish on 150mm concrete slab bed on a separating layer of building paper to BS 1521:1972 on 80mm thick Kingspan 'Kooltherm' K103 floorboard insulation on Visqueen 1200 d.p.m. on 20mm sand blinding on min. 150mm well consolidated hardcore. Provide 25mm 'Kooltherm' insulation to external perimeter edges of slab. Visqueen d.p.m. to be turned up around perimeter edges of slab and tucked in under horizontal dpc of inner leaf. Insert 2 number 100mm dia plastic pipes under new slab to give through ventilation to void under existing building, insert cavity tray over at cavity wall and exterior vent.

New Roof Construction
Pitched roof with interlocking tiles to match existing (Marley concrete grey tiles) with min headlap of 75mm on 50x38mm sw battens on 1 layers Tyvek Supro felt on 175x50mm C16 sw rafters @ 400mm cts. Rafters fixed to wall-plate with framing anchor or truss clip. Fix 12.5mm foil backed plasterboard and skim to underside of 125x50mm C16 sw ceiling joists @ 400mm cts. Insert 150x50mm cross bracing under ridge.

Roof insulation between and under rafters (U value 0.15W/m²K)
1 layers of 125mm Thermopitch TP10 between 50mm Thermopitch TP10 under 12.5mm plasterbd to allow sag of breather membrane. to provide a maximum 'U' value of 0.15W/m²K, all fixed in accordance with manufactures instructions. Rafters overlaid with Tyvek SUPRO breather membrane with joints lapped and taped and roof to be finally covered with Samaco Slates (600 mm x 300 mm x 9 mm at 55 mm headlap), laid on 50 mm x 25 mm tanalised softwood battens. Maintain 50 mm air gap above insulation.

Fixings
Strap down new roof and ceiling with 1000 x 5 x 38 mm mild steel straps at 2 centres fixed across two rafters/joists with 3.35x50 wire nails at rafter and ceiling tie level

Continuous Ventilated Ridge
Provide new continuous ventilated ridge to be mechanically fixed and bedded in sand/cement mortar, or dry fixed system in accordance with BS 5534 2014

Gutters and fascia
100 mm upvc gutter connected to existing falls to outlet. Fixed to 19 mm exterior grade plywood fascia boards. Provide 12 mm exterior grade plywood soffits fixed directly to underside rafters with continuous upvc soffit ventilators to vent roof space to BS 5250.

Heating
To be supplied by balanced flue gas boiler condensing type, radiators and cylinder min Sedbuk efficiency rating of 88%

Heating
Extend all heating and hot water services from existing and provide new thermostatic valves to radiators. Heating system is to be designed, installed, tested and fully certified by a GAS SAFE registered specialist. All work to be in accordance with the Local Water Authority by laws, gas safety requirements and IEE Regulations.

Radiators
Provide and fit thermostatic control valves to radiators.

PROJECT
PROPOSED SINGLE STOREY
SIDE BEDROOM EXTENSION.
DRAWING TITLE
PROPOSED LAYOUT
AND SECTION.
CLIENT
MR. D. BREWSTER.
ADDRESS
15, WHITFIELD CRE,
NEWHEY, ROCHDALE.
SCALE
SCALE 1:50@A1
DRAWING No
FO 09235854/3.
DATE
SEPT 2023.

