



SECTIONAL ELEVATION AA

Excavations for foundations
FOUNDATIONS MAY BE RECONSIDERED WITH BUILDING CONTROL DEPENDANT ON SITE SPECIFIC GROUND CONDITIONS.
Site Enablement
Reduce ground levels in area of works and set aside material excavated for reuse landscaping the garden and ramp.
New extension and terrace.
Foundation trenches to be excavated to suit dimensions indicated and taken down to virgin ground for inspection by Local Authority Building Control officer.
Depth may vary according to site conditions and site contours, but the top of concrete must be minimum 450 mm. below the finished ground level. Strip foundations to be generally 600 mm. wide x 225 mm. min. deep to external cavity walls and 450 mm. x 225 mm. min. for 100 mm. load bearing internal walls or with minimum 150 mm. toe where wall thickness may vary.
Form all steps in level of foundations in vertical increments of 225 mm. to suit block coursing, and with min 300 mm horizontal overlaps.

Concrete
Concrete to be premixed C20P as described in tables 1 and 2 of BS EN 206:2013 + A1:2016 maximum size aggregate to be 20 mm. All concrete shall be distributed and placed in position as quickly as practicable by a method which precludes contamination, segregation or loss of materials, compaction shall be complete before the initial set commences. Partial set concrete shall not be reworked or used. All concreting shall be continuous to completion or to an approved construction joint.
During the first seven days the concrete shall be protected by whatever means to prevent over rapid drying. Steps in the foundations are overlap by twice the height of the step or by 300 mm. whichever is the greater and should not be of greater height than the thickness of the foundation. In general steps should be in increments of 225 mm. to suit block coursing.
Tie new foundation horizontally to existing foundations, by inserting 3 no. 9 mm. twisted mild steel bars in a dovetail pattern into the face of the existing strip foundations and install new concrete foundations to fully surround steel connections, to form a horizontal tie between the two foundations, to prevent uneven settlement.

Roof Fabric and structure
Approved tiles similar on 25 mm. x 50 mm. treated timber battens on breathable sarking felt on hydro nailed high tie trusses at 400 mm. centres, Robert Jackson and Sons or similar or other approved, fixed to 100 mm. x 50 mm. timber wall plates laid on mortar beds and fixed to inner leaf of external walls with BAT MS305 straps at 1800 mm. centres
All trussed rafter roof structures are to be horizontally, vertically diagonally and chevron braced to comply with BS 5268 Part 2 and 3 1985.
Insulate loft space with minimum 350 mm quilt insulation laid between and over ceiling joists/raised tie and minimum 15 mm rigid foam loft insulation between the blades with sloping soffits .Solid insulation to be cut to fit neatly between blades with no air gaps. Line cleanings with 40 mm 25 mm insulation 15 mm plasterboard and skim. All electrical wiring is to be fixed to trays above the insulation layer. Supply and fix a lockable sealed and insulated loft hatch in the new landing area for maintenance access to the loft.
Trim out for Velux roof lights strictly as recommended by the truuses rafter manufacturer supplier.
Fix BAT MS 305 straps at 2000 mm. maximum centres to head of side walls and gables throughout perimeter of the new roofs, fixed to 3 no. truss perpendicular and along sides of truss members parallel to straps. Fix solid strutting/ packing between individual joists and last roof truss and wall where straps are fixed.
All roof truss design, layout and structural calculations are to be provided by the manufacturer/supplier to Building Control for approval prior to that section of the works proceeding on site. The roof structure details will be provided by the timber frame manufacturer.
Leadworks to roofs.
All lead gutters, valleys, trays, soakers and flashings are to be in the correct code thickness as recommended by the Lead Sheet Manufacturer's Association and produced and fixed strictly concordance with their published recommended details.

Cavity wall construction. U Value 0.22 W/M²K
Form 300 mm. thick cavity walls consisting 2 coat waterproof render to match existing on 3.5 kN solid concrete blocks, Armstrong's or similar, external leaf 100 mm. clear cavity with 60 mm. Kingspan insulation or similar and 100 mm. thick Armstrong Insulite concrete block inner leaf. All walls are to be built in a manner to ensure the building would pass a pressure test to achieve 5.5 M² / (h.M²) at 50PA or better. Walls are to be dry lined internally with minimum 15 mm. foil backed plasterboard on dabs Shower rooms and Kitchens Utility rooms are to have water resistant high density plasterboard linings.
Fix insulated cavity closers at all jambs and cills to doors and windows and fix tray under cills and lintels to heads of openings.
Cavity wall ties to be Furfix stainless steel specifically designed for 100 mm. cavities at 750 mm. horizontal centres and 450m vertical centres, offset 375 mm. horizontally to form a diamond pattern or as otherwise recommended by the wall insulation manufacturer. Fix additional wall ties every course at all corners and jambs. Seal heads of cavities with inert fireproof material 6mm thick Masonite or similar bedded in mortar and fixed between toes of spars. Fix Catnic Cougar or IG type stainless steel or galvanised lintels or similar designed for 100/125 mm. cavities. Lintels to have insulated voids and integral cavity trays and minimum bearing of 150 mm. Fix additional bitumen trays in severe weather areas. Fix weep holes in outer leaf at 600 mm. centres above all cavity trays. All openings are to be sealed to comply with the pressure test requirement (5.5 M² / (h.M²) at 50PA.)
Tie new cavity walls to existing with crocodile stainless steel wall connectors or similar, bolted to parent wall and with integral fish tail wall ties built into coursing of new block/brick wall leaves. Cut out minimum 25 mm. wide chase to form space for insulated damp proof course or cavity closer to isolate inner leaf walls from external walls.
Fix expansion joints to cavity walls at maximum 5000 mm. centres. Fix additional wall ties at each expansion joint.

Existing external parent wall becoming internal wall.
Strip off any external render and insulation and dry line as described above.
Non-Structural stud partitions: Fix new stud partitions to layout shown. Partitions to be 75 mm x 47 mm. timber studs at 400 mm. centres built off 100 mm x 75 mm. sole plates with solid bracing at maximum 900 mm. vertical centres. Fix 10kg/m² 15 mm thick plasterboard and skim both sides. Wet room plasterboard linings to be humidity resistant plasterboards. Fully insulate between studs with Rockwool insulation to reduce the passage of airborne sound. Bolt vertical studs to adjacent walls to provide lateral restraint to walls and studs to form rigid grid.
Fix double joists under partitions parallel to joists and solid noggins under partitions perpendicular to joists.
Internal walls/partitions
100 mm thick solid block walls built up off foundations. Dry line walls as described above. All plasterboard in wet rooms to be high density moisture resistant plasterboard.

New cavity wall below DPC generally.
300 mm. thick cavity walls consisting 100 mm. thick solid concrete block cavity back filled with concrete to ground level max 225 mm below damp-proof course and 100 mm. solid concrete block inner leaf. Cavity wall ties to be Furfix stainless steel or similar specifically designed for 100 mm. cavities at 750 mm. horizontal centres and 450m vertical centres, offset 375 mm. horizontally to form a diamond pattern. Fix additional wall ties every course at all corners and jambs. Between ground level and floor level, fix bituthene Hyload DPCs to both inner and outer leaves of walls at min of 150 mm. above ground level. Lay facing bricks from one course below finished ground level dpc level in outer leaf to form plinth.
New Ground floor to extension.
New ground floor to extension, Ground Floor U Value 0.14 W/M²K
Ground Floor Construction. U Value 0.14 W/M²K
Allow for flooring finish thickness on 100 mm concrete floor slab on 500 gauge Visqueen vapour barrier on 100 mm Celotex GA4000 floor insulation slabs on 1200 gauge damp proof membrane. All on 50 mm sharp sand blinding on minimum 150 mm thick sand blinded hard-core sub-base laid and consolidated in 150 mm layers no thicker than 600 mm. deep. Visqueen Damp Proof Membrane is to overlap D.P.C. in inner leaf of external walls to form a permanent damp proof barrier. All damp proof courses, and vapour barriers are to be overlapped and taped as recommended in the manufacture's specification for the location and purpose.
New ground floor to be level with existing ground floor

SCALE BAR 1/200 ORIGINAL DRAWING SIZE A3	0.0	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0 metres			80.0 metres	70.0	60.0	50.0	40.0	30.0	20.0	10.0	0.0	SCALE BAR 1/500
SCALE BAR 1/100	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0 metres			400.0 metres	350.0	300.0	250.0	200.0	150.0	100.0	50.0	0.0	SCALE BAR 1/2500
SCALE BAR 1/50	0.0		1.0		2.0		3.0		4.0		5.0 metres												

16 BRAYTON ROAD BRANSTY WHITEHAVEN CUMBRIA CA28 6EF FOR MR and MRS M GRAHAM	ALTERATIONS AND EXTENSION	PROPOSED SECTION	Scale: Date: DWG No.	1/50 @ A3 APRIL 2022 22/0334/07	REV DATE	Geoffrey Wallace Limited FCSd MCiAT Architectural Design and Technology Mobile 07816046756 geoffreywallacelt@gmail.com
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