

Proposed Cross Section 1:20

General

All work to comply with the Building Regulations 2010/13 or as subsequently amended. All contractors should be qualified, experienced and competent. All work should be undertaken in accordance with current British standards, Code of Practice, Health and Safety Legislation, IEE Regulations, Gas Safety Regulations and Manufacturer's Instructions. All plant and equipment to be installed by an experienced, competent contractor in accordance with manufacturer's instructions. All materials to be used and installed strictly in accordance with the manufacturer's instructions and guidelines, British Standards & NBS Specification as appropriate. All materials to be used to comply with the current and relevant British Standard or BBA certificate appropriate for the use as intended. Workmanship shall be carried out in accordance with the appropriate British Standard code of practice and installation of materials shall strictly be in accordance with all manufacturer's recommendations. All workmanship and installation to be carried out strictly in accordance with the contract drawings and documents, including specifications and details. Alternative material and construction details may be used providing the specification and performance, for the design life of the material, detail or unit is at least equivalent to that specified on the associated drawings or specification. Approval for the use of alternative materials, details or unit has to be agreed with the client, Architect/engineer and the local Building Control Authority or Approved Inspector. Contractor & Project Management are responsible for checking all dimension on site prior to ordering any materials, components or equipment required in the project. Any anomalies shall be raised and discussed prior to ordering to ensure a resolution can be achieved before works are carried out on-site. Any preferred alterations should be approved by the architect and engineer in advance so as not to prejudice the time and cost of construction. Where a specified item or installation requires client and/or Building Control Officers Approval/Agreement the contractor should establish, if possible, the exact requirements before pricing works. If the requirements are not able to be agreed at the time of pricing then the contractor should make it explicitly clear to the client which items are excluded at the time of pricing and what effect the omission will have, if an, on the programming of the work both in time and cost. The Client & Contractor should ensure that Planning Approval and Building Regulations Approval have been granted prior to works commencing on site. Where required the Contractor should agree the requirements of Building Control either Local Authority Building Control or an Approved Inspector prior to works commencing on site. In such cases as Building Notice or Approved Inspector. Contractor shall inform Building Control either LABC or Approved Inspector as applicable prior to commencement of works on site to ensure adequate time to ensure works can be inspected prior to covering up by subsequent works. The Client should satisfy themselves that where appropriate, if any works are taking place within 3 meters of a neighbouring boundary, a Party Wall Notice has been served and agreed with any neighbouring property owners before an work commences on site, in accordance with the 1996 Party Wall Act. Reproduction of the contents of associated drawings and specification are strictly forbidden without prior authorisation from the Architect or Engineer. The Copyright of any drawing and its contents belong to the Architect/Engineer stated at the bottom of the drawings. No Unauthorised reproduction, in part or whole, in any form whatsoever is permitted without the expressed permission of the relevant party.

Foundations

Foundations specified assume good load bearing strata's, assumed safe normal ground bearing pressure of 75-150kN/m2. Exact foundation depths, widths and thickness may change having regard to physical conditions and features found on site when construction starts LABC or Private Inspector to confirm final depth. All foundations are to be taken below the invert level of the existing drainage system and any new connections, final depth to be confirmed on site with LABC following inspection of the trenches. Concrete for Traditional Deep Strip Foundations, Strip Foundations and Trench Fill Strip Foundations to generally be for single storey and two storey construction, unreinforced C35 Concrete to BS EN 206-1 and BS 8110 or as amended. Foundations for Domestic Loadings over two storeys not including the roof void are to be designed by an agreed and appointed Engineer. Foundations for Domestic Loadings where ground conditions are anomalous and known to be of a poor make up and low ground bearing pressure are to be designed by an agreed and appointed Engineer. **Traditional Deep Strip Foundations and Trench Fill Foundations typically to be C35 Concrete.** **Perimeter Wall/Party Walls typically comprising of 102.5mm brick outer leaf, with 100mm cavity and 100mm inner leaf of block work to be 600mm wide and typically 775-1000mm thick depending on ground conditions.** **Internal/Single width walls typically comprising of 100mm blockwork to be 450mm wide and 775-1000mm thick depending on ground conditions.** Foundation depths to be confirmed on-site with LABC or Private Inspector but to generally be 1000mm deep in clay soils, 750mm in non-clay soils, 450mm in strata's such as rock.

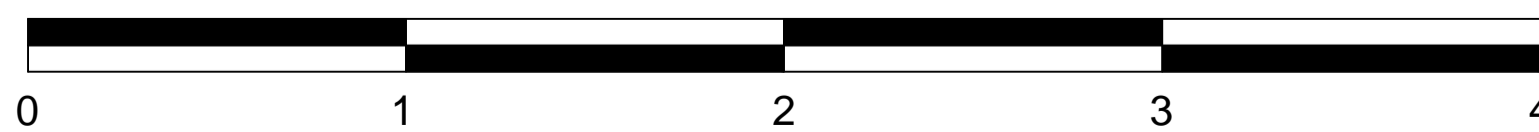
Foundation Precautions

Trenches exposing roots of 50mm diameter or more beneath the spread of the tree should be excavated by hand in compliance with BS5837:1980. It will need to be agreed on site with the building Inspector if the trench needs to be deeper due to roots invasion

Foundation depths should be at least:

Clay Soil with trees with in build area, depth to be 1500mm - 2100mm Final Depth to be confirmed on site following excavation to a minimum depth of 1500mm with LABC Inspector. Inner face of foundations to be protected from movement caused by seasonal moisture changes due to trees, install Claymaster high performance compressible-fill material or similar as per manufactures instructions .

If required Engineer to design foundations to suit any specific ground conditions and impediments that may arise from subsoil type and structures that surround the development.



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Perimeter Cavity Walls

Extension U-Value of at least 0.28W/m²K to be achieved. Wall starter ties such as Ancon Staifix Universal Wall Starter System to be installed to existing external wall, as per manufacturers design and details. 102mm brick outer leaf (Colour, Finish and manufacture to be confirmed by contractor with client prior to ordering of materials. Form 100mm Cavity and full fill the 100mm cavity with 100mm Superglass 36 or equivalent. Double triangle stainless steel wall ties at 450mm maximum vertical spacing, 750mm maximum horizontal spacing. Ties at 300mm maximum vertical spacing at window and door reveals to BS1243. Cavity closures at window and door openings to have vertical DPC and insulated cavity closure to prevent cold bridging. 100mm Plasmor Aglite block - minimum density 1050 Kg/M3 Outer leaf Damp Proof Course (DPC) to be installed at a minimum of 150mm above the external ground level. Inner leaf Damp Proof Course (DPC) to be installed directly below suspended ground floor or integrally with solid ground floors. Cavity to be filled with lean-mix concrete from footing or trench block level to 150-225mm below floor level. 13mm plaster or cement: sand render with plaster skim (minimum 10 Kg/M2). Alternatively, a single layer of 12.5mm plasterboard bedded using the picture frame method of fixing plus 3 mm skim coat, minimum mass per unit area of 10kg/m² DPM to extend a minimum 600mm up wall and linked into DPC on internal leaf. No electrical installations to be below 650mm from finished floor level. DPC to be installed a minimum of 150mm vertically in both inner & outer leaf, DPM to be linked into DPC. Vertical DPC to be installed at all fenestration points at external wall. Vertical DPCs to be insulated type, and be in line with windows and doors installed within the openings Artificial Stone Quoins, Heads, Sills & Banding Courses to be installed as per manufacturer's instructions & details as indicated on the associated drawings. Install air bricks and sleeves or telescopic vent sleeves to provide minimum air flow of 1500mm²/m as required if timber suspended floor is employed rather than solid concrete floor. Capping to parapet walls to match existing boundary wall capping (aggregate/colour to be confirmed by client) Capping Stones to be fixed with stainless steel fixing bracket, mechanically fixed to inner leaf block work as per manufactures design & specification. **All door and window reveals to have 25mm Celotex Insulation to all internal sides to prevent cold bridging. Reveals to sides and bottom to be cut back 25mm below/from external opening to allow for insulation to be installed. Upper layer to be installed below lintel or structural steel windows and door frames to be designed to accommodate the additional 25mm insulation layer.** **Ground Floor Plaster Boards to be laid horizontally on 25x38mm treated timber battens on vertical DPC at 600mm centres with horizontal noggins every 600mm up wall on DPC fixed to wall.**

Existing Main House Alterations

Existing Front Elevation Alteration/Repairs Existing spalled brickwork to be carefully cut out and reversed where possible and re-bedded. Bricks to match existing building to be installed where spalled brickwork is too deteriorated. Existing brickwork to be re-pointed where required to a good standard of repair Stepped cracking in the joints above Archway are to be secured from inside of Archway with Structural Steel Lintel as per Engineers design and details. Existing motor joint cracks to Archway to be monitored using s/s studs to the brickwork on either side of the cracks, the distance being measured using vernier callipers Existing lime and sand skirt render to be made good. Air bricks to be cleared and replaced where necessary. A new layer of lime and sand skirt render to be applied to remainder of front elevation. Air bricks to be cleared and replaced where necessary.

Existing Rear Elevation Alteration/Repairs

Existing brickwork to be re-pointed where required with lime mortar to rear elevation Existing three panel sliding sash windows to be upgraded and weather protected. Existing wooden frames to be retained with sash window sections to be replaced like for like with double glazed panels Rear single storey pitch roofs to be altered to 30° angle. Roof tiles to match existing suitable for new raised pitch

Upgrade of Existing External Boundary Wall

Existing external boundary wall to be used to form external wall of extension, walls to be upgraded and insulated following removal of existing plaster. 50x50mm treated timber battens to be installed to existing external walls at 400mm centres on DPC between wall and batten. All perimeter walls to be lined internally with Kingspan K118 Insulated Plasterboard comprising of 50mm insulation and 12.5mm plasterboard with 3mm skim.

Concrete Ground Floor (Habitable Areas)

Floor constructions achieve U value of at least 0.22 W/m²K 65mm floor screed with 25mm insulation around perimeter on 500 gauge visqueen slip membrane 100 mm Kingspan Thermafloor TF70 insulation 100 mm thick C25/35 concrete floor slab on 1200 gauge Visqueen DPM on 25 mm sand blinding Minimum 150 mm thick compacted type 1 limestone hardcore (no demolition materials to be used unless clean and tested to ensure absence of sulphates)



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Altered/ Replacement Roof (Single Storey Rear Entrance)

Existing single storey rear entrance to main house to have existing pitched roof replaced with 30° roof. Infill brickwork to match existing wall construction. Where required: Roof construction achieve U value of at least 0.18 W/m²K Roofing tiles to match existing roof to be suitable for approximately 30° ∠ (to be confirmed on site) Ventilation roof tiles to be installed as per manufacturers design and specification High performance breathable roofing felt 150x50mm C16 rafters at 600 mm maximum centres. Install 50x150mm C16 timber plate to existing boundary wall side with 18mm diameter bolts at 400mm centres and hang rafters off wall plate with joist hangers as per manufactures design and details. Beam filling to be carried out with insulation to ensure insulation continuity between walls and roof 30 mm x 5 mm galvanised mild steel restraint straps to be provided at maximum 1.5 m spacing (every 3rd rafter) and be fixed across at least 3 joists. To be 1000mm minimum in length and fixed to 4no blocks. 100 mm Kingspan TP10 insulation between rafters linked into wall insulation 500mm Kingspan TP10 to underside of rafters on sloping ceiling sections Roof void to be insulated with 300mm Rockwool mineral wool insulation laid in 2no. layers comprising of 100mm Rockwool mineral wool insulation between ceiling joist with 200mm Rockwool mineral wool insulation laid perpendicular to ceiling joists. 12.5 mm plasterboard plus 3 mm skim coat to finish

Altered/ Replacement Roof (Single Storey Store)

Existing store and entrance to main house to have existing tiled pitched roof replaced with 30° roof. Infill brickwork to match existing wall construction. Where required: Roofing tiles to match existing roof to be suitable for approximately 35° ∠ (to be confirmed on site) Ventilation roof tiles to be installed as per manufactures design and specification High performance breathable roofing felt 150x50mm C16 rafters at 600 mm maximum centres. Install 50x150mm C16 timber plate to existing boundary wall side with 18mm diameter bolts at 400mm centres and hang rafters off wall plate with joist hangers as per manufactures design and details. 30 mm x 5 mm galvanised mild steel restraint straps to be provided at maximum 1.5 m spacing (every 3rd rafter) and be fixed across at least 3 joists. To be 1000mm minimum in length and fixed to 4no blocks.

Flat Roof (COLD DECK Roof)

Roof construction achieve U value of at least 0.18 W/m²K GRP or Single Ply Roofing System installed as per manufactures recommendation and specification 18mm exterior grade plywood Firings to provide minimum fall of 1:60, 25mm starting depth 50x150 mm C24 joists at 600 mm maximum centres or similar installed as per manufactures instruction. 100mm Kingspan TR24 or similar between joists with infill between joists. Fix joists with joist hangers as per manufactures details, to new external wall side Install 50x150mm C16 timber plate to existing boundary wall side with 18mm diameter bolts at 400mm centres and hang joists off wall plate with joist hangers as per manufactures design and details. Herring bone strutting or solid noggins to be provided mid distance span Beam filling to be carried out with insulation to ensure insulation continuity between walls and roof 30mmx5mm x 750mm long galvanised holding down straps with 90° twist at 1 m maximum spacing Vapour barrier as per manufactures design and specification 62.5mm Insulated Plasterboard K118 comprising of 50mm insulation 12.5mm plasterboard with 3mm skim finish Proprietary abutment vents such as AIRTRAK roof void vent system to be installed as per manufactures recommendations to run inner face of parapet wall (See section)

Windows & Doors

All glazing to achieve a maximum average 'U' value of 1.4 W/m²K. UPVC Casement frames to be to BS EN 12608, B.S 6375 & B.S 7412. UPVC Box Sash Vertical frames to be to BS EN 12608, B.S 6375 & B.S 7412 Timber Composite Doors to be BS 8529:2010 Glazed panels to generally comprise low 'E' coating to cavity side of inner panel and have a minimum cavity width of 16mm. All frames to be draught sealed. All frames to be mastic sealed to surrounding masonry. 10mm gap under all internal doors the windows will be from band A and achieve a min U value of 1.4w/m2k All windows are to achieve a min U value of 1.4w/m2k All doors to achieve a min U value of 1.8w/m2k Trickle Ventilators to be provided to each window frame to give at least 5000 mm² per room **Note: Existing three panel sliding sash windows to be upgraded and weather protected. Existing wooden frames to be retained with sash window sections to be replaced like for like with double glazed panels**

Fire Protection

Structural steelwork to be provided with at least 30 minutes fire resistance by the provision of at least one layer of 15mm Fireline board (British Gypsum) plus 3mm skim coat. or Structural steelwork to be provided with at least 30 minutes fire resistance. Fire resistance to be provided by Intumescent paint, installed as per manufacture's recommendations to ensure a minimum 30 minute fire resistance is achieved on all structural steel.

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Rev	Date	Revisions	By
B	10-03-21	Update for Planning	CG
A	18-02-21	Updated Specification	CG



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TITLE
**Proposed Foundation
and Flat Roof Joist Plans
and Cross Section**

Scale: 1:50/20 A1 Date: 15-02-21

Drawn By: C Giles
Checked: SN
Approved: SN

Status
 WORKING DRAFT not for issue
 DRAFT not for construction
 CONSULTATION DRAWING not for construction
 PRELIMINARY DRAWING subject to detailed design
 FINAL DRAWING
 CONSTRUCTION DRAWING

Drawing No : J8046-207 Rev: B