

FOUNDATION LAYOUT

SCALE 1:50

FORMATION LEVEL

Foundations for the proposed development should comprise of conventional shallow reinforced strip foundations bearing on the natural brown sandy Clay at 600mm below existing ground level.

STRIP FOUNDATION

200mm thick
RC35 concrete
1 layer A393 reinforcement (btm)
35mm minimum cover.

SUBSTRUCTURE WALLS

Outer leaf - 100mm Block
Cavity - 60mm (concrete infill)
Inner leaf - 140mm Block

CONCRETE GROUND FLOOR SLAB

150mm thick
RC35 ground bearing slab
1 layer A393 reinforcement (top)
35mm minimum cover

SER Cert. No: 332765 Date: 01.11.20

BW Ref. No: 20/00096/EBWS
BUILDING WARRANT

GROUND FLOOR LAYOUT

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ALL LINTELS AS FOLLOWS (U.N.O.):

Inner Leaf: 3/45x220mm/C24 timber lintel
Outer Leaf: Catnic CTF5 lintel

Masonry Walls: Robeslee 'U2' lintel

All proprietary lintels to have a minimum end bearing of 150mm (unless noted otherwise)

All timber lintels spanning over 1.2m to be supported by 2 cripple studs.

Install lintel props to underside of Catnic lintels at 1m maximum centres during construction. Do not remove prop until mortar has cured and all wall ties installed.

All proprietary lintels & fixings to be installed as per the manufacturers written instructions.

PERIMETER WALLS

GROUND FL. - ROOF LEVEL

Outer leaf - 100mm Stone
Cavity - 50mm
Inner leaf - 45x145mm timber studs, grade C16, at 600mm centres
9mm ply/osb sheathing

INTERNAL WALLS - NON LOADBEARING

GROUND FL. - ROOF LEVEL

Single leaf - 45x95mm timber studs, grade C16, at 600mm centres
dwangs at mid-point


ALL PADSTONES AS FOLLOWS:

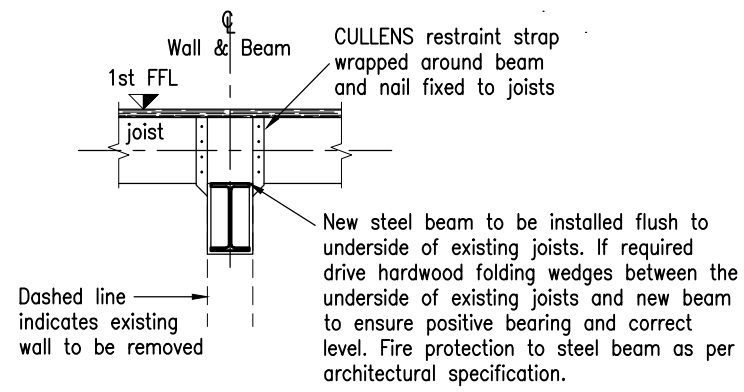
P1 440x100x145mm
RC35 Padstone
Providing 100mm bearing
Padstone cut from Robeslee 'U2' lintel

TYPICAL FIXING TO EXISTING WALLS

New Timber Stud wall to be tied to existing wall using Hilti HRD-S10 Frame Anchors at 300mm vertical centres. (Hole to match centre of brickwork coursing).
Anchor Embedment Depth = 50mm
Anchor Tightening Torque = 10Nm
New masonry to be tooth jointed into existing.

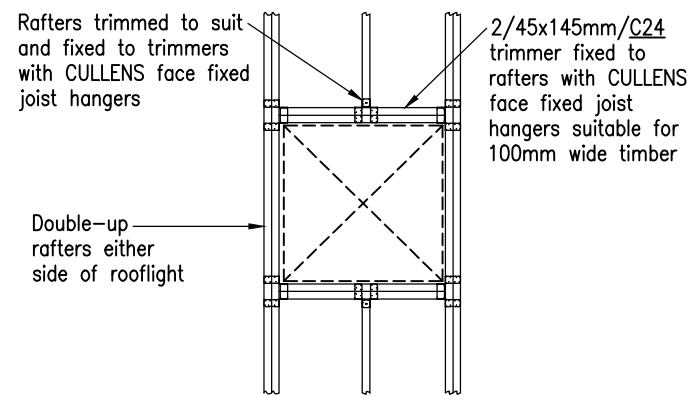
REV.	DATE	DESCRIPTION
A	02.03.21	AMENDED TO SUIT CLIENT REQUEST

 J O Design & Detailing Ltd <small>CIVIL & STRUCTURAL ENGINEERING</small>		
PROJECT	Single Storey Extension	
CLIENT	Mr Andrew Purnell	
LOCATION	The Tollhouse, 18 Balfron Road, Killearn, G63 9NJ	
SCALE	AS NOTED	
DATE	OCT 2020	
DWG. TITLE	DWG. No	REV.
PROPOSED LAYOUT	1012-9000	A



SLAPPING BEAM DETAIL

SCALE 1:20



ROOFLIGHT TRIMMING DETAIL

SCALE 1:50

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&()%"*	Mr Andrew Purnell	
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PROPOSED LAYOUT		1012-9020 A

SCALE 1:20

Demolition/Excavation Notes:

- Any unusual or unforeseen features are to be brought to the immediate attention of the Structural Engineer.
- Any defects in existing blockwork/stonework to be made good by pointing/tooth jointing into the existing.
- All setting out for new works to be site sized by the contractor and confirmed to the Architect/Structural Engineer.
- The contractor is responsible for the designing of all temporary works. Contractor to ensure that suitable propping is used to support existing structure prior to carrying out any works. All loads shown on drawings are unfactored.
- The Contractor must ensure that all Temporary Works design is carried out in accordance with BS EN 5975, BS EN 12811 and BS EN 12812.
- All services to be capped and terminated for the proposed demolition.
- Existing services shown on the drawing are approximate. Contractor to contact service provider prior to excavation and confirm re-routing/protection of service. Contractors should carry out their own services check prior to any works and notify all relevant parties.
- All debris to be carefully removed from site and disposed of in the appropriate manner.
- Demolition works to BS6187:2000 and Health & Safety at Works Act.
- Any Asbestos encountered during the works to be removed in accordance with The Asbestos Code of Practice guidance Notes 36 & 37.
- All Excavations should be carried out in accordance with BS6031.
- If any made ground or suspect material is encountered during operations, then all works to cease and the Local Authority notified immediately.

Foundation Notes:

- New foundation formation level must achieve a minimum of 600mm depth from ground level to underside of foundation, ensuring required frost cover.
- Foundations for the proposed development should comprise of conventional shallow reinforced strip foundations bearing on the natural firm strata. The natural firm strata has an allowable bearing capacity of 75kN/m².
- Foundation should be cast upon firm sub-base, any Loose, Soft or Inert material/areas encountered within the excavated base of the trench and solumn should be removed and replaced with lean mix concrete or Type 1 material well compacted in 200mm layers. The excavated and disturbed foundation formation level should be compacted with two passes of a vibrating plate compactor.
- The foundation formation level should be provisionally protected with a layer of blinding concrete, should there be a time lapse with the concrete pour, to minimise potential weather damage to the bearing stratum.
- For setting out of walls, levels and details of damp proofing refer to Architects layouts.
- All walls to be centred on foundations unless noted otherwise.
- Stepped foundations, when required, should not be stepped greater than the foundation depth. Stepped foundations positioned by Contractor on site and agreed with Engineer.
- Care to be taken when excavating to ensure that existing foundations are not undermined.

Concrete Notes:

- Cement used in all concrete works shall be portland cement to BS EN 197.
- Coarse and fine aggregates used in all concrete works shall be in accordance with BS EN 12620.
- Reinforced Concrete Foundations to be grade RC35 in accordance with BS 8500
- The required concrete cover shall be 35mm to all reinforcement steel u.n.o.
- All mesh fabric reinforcement shall be in accordance with B.S. 4483. It will be supplied in flat sheets and have a minimum lap length of 300mm on each edge. All laps are to be staggered.

Masonry Notes:

- All blockwork to have a minimum compressive strength of 7N/mm², min. density 1900Kg/m³, with mortar designation (iii) UNLESS NOTED OTHERWISE.
- Fine aggregates for mortar to be B.S. 1200
- Cement for mortar to be portland cement to B.S. 4027
- All beds and perpends must be properly filled with mortar and pointed to give a bucket handle profile.
- All brickwork should only be built when air temperature is at 3° and rising. Should overnight temperatures be forecast for frost the contractor will be required to protect any new built walling. All walling should be protected from frost for at least 7 days after erection.
- Halfen HTS-C12 stainless steel wall ties or equal to be provided at 600mm crs. horizontally and 450mm crs. vertically.
- Halfen HTS-FH12 stainless steel wall ties or equal to be provided at 600mm crs. horizontally and 450mm crs. vertically nail fixed to Timber studs.
- Wall ties to be provided at 225mm centres around all openings.
- Wall ties must have a minimum of 50mm embedment into the mortar joint.
- Movement joints to be provided at the following centres (Architect to confirm locations) :

Blockwork – 6000mm (unreinforced)
Brickwork – 12000mm (unreinforced)

- All brickwork to be adequately propped and shored until finishing stage to protect the structure from wind and other adverse forces.
- All materials & workmanship to comply with the relevant sections of the following standards:

Brickwork to BS EN 771 & 772
Brickwork ancillary components to BS EN 845
Mortar mixes to B.S. 5628
Design of brickwork to B.S. 5628

Timber Notes:

- Strength classification to be C16 UNLESS NOTED OTHERWISE to B.S. 5268: part 2.
- Plywood as specified shall be manufactured in accordance with the relevant British Canadian, Finnish or Swedish standards as listed in B.S. 5268: part 2, as so marked.
- Chipboard for flooring shall be in accordance with B.S. 5268: type 2.
- Timber trussed rafters: design, manufacture and bracing to be in accordance with B.S. 5268: part 3.
- Fastening and accessories Anti-Corrosive finish to be:
 - Galvanising to BS EN ISO 1461
 - Zinc or Cadmium plating to B.S. 1706: class A, or appropriate requirements of B.S. 3382: part 1 and 2, or
 - Sherardizing to B.S. 4921: class 1
- Anti-Corrosive finishes to fastenings used to secure hangers, anchors and straps to be compatible. All proprietary fasteners and accessories to be fixed and installed in strict accordance with the manufacturers written instructions.
- Nails: to B.S. 1202: part 1
Wood screws: to B.S. 1210
Bolts & Nuts: to B.S. 4190
Washers: to B.S. 4320
- Purpose made metal plate fasteners, gusset plates, framing anchors, joist hangers: to B.S. 6178: part 1 or in pressed or seam welded mild steel to B.S. EN 10025 or EN 10113.
- Applied treatments to B.S. 5268: part 5. All applied treatments shall be compatible with each other and with the metal components and adhesives. All treatments are to be applied before delivery to site.
- All joints shall be formed in accordance with the appropriate recommendations of B.S. 5268: part 2
- Notches and holes in structural timber will not be permitted without agreement by the Engineer.
- Fabrication drawings and calculations must be submitted to the engineer for review 14 days before manufacture commences.
- All bracing to be of min. size 22 x 97mm. Free of major defects and fixed with 2No. 3.35 ø x 65mm galvanised round wire nails at each cross over.
- All bracing to comply with the TRA technical handbook.
- Strutting or Blocking of timber joists/raftes should be as follows:

2.5m to 4.5m	1 at mid-span
Over 4.5m	1 at 1/3rd points

Steelwork Notes:

- All steelwork to be grade S275 to BS EN 10025 for hot rolled sections.
- All INTERNAL steelwork painted as follows:
 - Preparation
All steelwork to be shot blasted to Swedish standard S.A. 2.5 and BS 7079: part 1: 1989 Surface profile: range of 30–75 µm.
 - In-Shop Application
Apply one coat W & J. Leigh's Epigrip C400 epoxy zinc Phosphate primer to a dry film thickness of 75 µm.
- Fireproofing Structural members should be carried out by applying all exposed steel with Leigh's Firetex intumescent paint providing 2 hours fire resistance or by encasing the steel in 1 layer 15mm Fireline board to give a minimum of 30min. fire protection fixed using gyplyner encase system as per architectural specification.

General Notes:

- For all other Existing/Proposed layouts and Elevations refer to Architects drawings. This drawing and associated drawings are to be used solely for obtaining building warrant approval only.
- Do not scale from any drawing. All sizes scaled from drawings will be approximate and should be checked on site by the user. If in doubt ask.
- The contractor must carry out works as specified and shown on the drawings. Any deviation from the drawings must be agreed with the Structural Engineer prior to construction, failure to do so may result in an amendment to building warrant and further cost to the client.
- For construction purposes it may be necessary to carry out extra design due to unforeseen circumstances and amend information shown on these building warrant approval drawings.
- All drawings marked "PRELIMINARY" are for discussion and approval purposes only.

Reference Drawings:


- 9000 Foundation & Ground Floor Layout
- 9001 Roof Layout & Section
- 9020 Typical Details
- 9050 Notes
- 9051 Notes

All drawings noted above are the original documents referred to and form part of the SER Design Certificate number as stated on these drawings.

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