

CONSTRUCTION NOTES...

FOUNDATIONS...

Foundations to be constructed in RC28/35 concrete to BS 8500 with a maximum aggregate size 20mm. Foundations are to be 200mm thick reinforced with A393 bottom mesh and 75mm cover. Widths are to be as noted on plan. See structural Engineers details for steel column foundations atbasement level. Strip foundations laid on load bearing strata, 450mm minimum below finished ground level. External Walls: house 700x200mm, Dwarf wall 500x200mm. All foundations to have steel mesh installed to structural Engineers design. Ground conditions must be checked on site as the above sizes are for good ground bearing conditions. Structural Engineer to be informed if any variance in ground conditions occur over site. Top of foundations minimum 450mm below finished ground level. Any step in foundation to be 225mm high with a 500 mm horizontal overlap.

SUBSTRUCTURE:

300mm dense cavity blockwork substructure 100 /60 /150, built up 450mm to ground level then to finished floor level 150mm block wall to dpc level with made ready.

FLOOR:

Basement floor level finish ...125mm concrete laid over site with 50mm Celotex GA4000 set against wall all round as separation between concrete floor and wall all set over 1200 gauge polythene DPM dressed up wall and dressed under wall DPC all round. Install mesh reinforcement throughout concrete floor as per engineers details. All laid over 50mm levelling sand on 200mm compacted hardcore. All service drainage pipes 100mm diameter for wc and smaller pipes for whb's and showers to be laid within the new floor feeding out to new drainage prior to concrete being laid to service the bathrooms and kitchen. Allow for rodding eyes to pipes which are longer than 6metres in either direction. Unless noted otherwise, it is presumed that a basic level of radon protection will be provided by taping and lapping all DPM joints and sealing all penetrations and junctions with cavity trays to form a continuous barrier. All membranes are to be protected from damage during installation. Any fill below slabs must be well compacted and not exceed 600mm in depth otherwise Engineer must be informed. Limit each slab to 35m2 with isolation joints around the slab perimeter and sealed. 5mm wide x 50mm deep sawn contraction joint between panels. Upper floor timber floor construction with 22mm t&g waterproof grade chipboard glued and nailed to 220x45mm floor joists set at 600mm ctrs infill dwith min. 50mm acoustic quilt finished on underside with 12.5mm plasterboard.

DPC:

All horizontal and vertical DPC's to be 1200 gauge and placed 150mm minimum above ground level horizontally and 150mm vertically. All dpc/dpm members to overlap. DPM joints in floor min. 150mm folded & taped .

SUPERSTRUCTURE:.

Extension walls formed with 20mm render finish on external leaf of 100mm dense blockwork built up from dpc level to wallhead levels all round as per the elevations or facing brick to basement walls as per elevations.. Block tied tostructural timber frame with galvanised ties set at 450mm vertical ctrs and 600mm horizontal ctrs. Allow for cavity vents at above dpc level and below wallhead level to each floor lev in height spaced max 1800mm trs. 50mm cavity with cavity stops at corners, round all door and window openings in wall, ceiling level and wallhead levels. Structural timber frame145x45mm having fully fitted 150mm frametherm 32 insulation within the timber wall panels of 147mm thickness faced both on outer side with 9mm OSB board and 30mm Celotex GA4000 insulation board on inner face all faced with 12.5mm gypsum wallboard with taped and plastered joints. Internal partitions 90x45mm all fitted with min 50mm thick mineral wool slab sound insulation. Stud wall frame to have double top and bottom rails to structural walls and single rails to partition walls faced with tyvek reflex stitched to cavity side of timber wall frame. Fit new double glazed PVC framed windows and doors with max 1.4 U value as noted on plans. all openings to be sealed with timber frame all round and have ingoes fitted inside and outside. Structural steel to be encased in 15mm Fireline board for 1 hr protection. No timber within struture encasing the steel beams and columns. Timber lintols over windows constructed with 3x197x47mm C16 timbers spiked together at 300mm ctrs as per manufacturers specifications and structure. Steel lintels over large screens to structural Engineers design and details. PC concrete lintels up to 2400mm wide having min. 150mm rest either side. All structural timbers to be in accordance with BS 5268 Part 2:1991 and BS 5268 Part 3:1985

PARTITIONS...

New timber stud partitions formed with 90x45mm (structural) double top and bottom rails and 70x45mm (non-structural) timber stud frame, with single stud top and bottom rails. All frames infilled with 50mm mineral wool batts or quilt with min. thickness of 50mm and density of 10kg.m3. (wire reinforced if required) 12.5mm plasterboard with density of 10kg/m2 screw fixed at max. 200mm ctrs both sides with taped/ filled joints between board on wall and ceiling and at all junctions. 95x12mm pencil round skirting boards all round with door blocks giving break to door facings. Shower rooms to have 18mm plywood fixed on internal walls underwaterproof grade plasterboard to allow future grab rails to be installed as required for disabled use. Walls in showers to have waterproof grade plasterboard fitted under waterproof sheeting having joints fitted and sealed with base shower tray as noted on plan..

ROOF:..

Precast concrete tiles to match those on main roof over the whole roof clipped and nailed. Roofing felt to be stitched through 9mm OSB sarking board to preformed trusses set at 600mm ctrs and rafters at 600mm ctrs. Vented ridge felt fitted full length of ridge. Trusses and rafter fixed to timber kit wallhead using glavanised truss clips fully nailed throughout. Roof pitch is 40 degree as per elevations allowing for continuous air vent at eaves with 25mm and between insulation and u/s sarking of 50mm. Proposed rooflights to have manufacturers flashings fitted all round as part of roof finish. Fit 100mm dia pvc gutters screw fixed to PVC fascia boards laid to fall to 75mm dia. rwp fixed back to wall with screw fixed clips. Gutter end clips to be fitted. All connected to existing drainage for the site and as noted on site layout plan. Allow for installation of rooflights Velux type GGU MK06 0070 78x118cm white polyurethane finish or similar approved manufacturer. Extract vents for kitchen, bathrooms taken through roof with tile vents

Dormer roof construction... front roof opening formed by cutting and bridling the affected rafters to form openings as per dimensions plans. Rafters either side to be doubled up to support existing roof. New external walls formed for dormer as follows...Structural timber frame145x45mm having fully fitted 150mm frametherm 32 insulation within the timber wall panels of 147mm thickness faced both on outer side with 9mm OSB board and 30mm Celotex GA4000 insulation board on inner face all faced with 12.5mm gypsum wallboard with taped and plastered joints. New flat roof formed with single layer PVC bonded on vapour barrier sticted on 9mm OS board nailed to 50mm wide tiltingfillets nailed to 220x45mm rafters set at 600mm ctrs having 175mm Celotex GA insulation board fitted between and having 50mm air gap to underside sarking. Air gap vented to outside air at fascia/soffiat and vent into exiting loft area.

INSULATION...

Install 2 layers of 150mm insulation quilt throughout loft ceilings with 1st layer between truses and the 2nd layer at right angles making sure that all roof vents are kept clear for air flow through roof space in truss area of roof. Vertical wall in loft to have 200mm insulation quilt fitted and should overlap with the insulation in the higher loft area. Install 180mm Celotex GA4000 insulation board with 50mm vented space to underside sarking linked to soffit ventilation and upper loft area ventilation and new dormer roof construction.. Install 25mm continuous vents using pvc trays at eaves level between all trusses on both sides and a continuous 5mm vented felt ridge stitched to sarking and over roof felt under dry fixed ridge. Basement walls to existing basement which become internal to be lined with 145x45mm timbers infilled with 140mm Celotex GA 4000 insulation board faced with gypsum wallboard.

INSULATION VALUES...

	Design	Maximum
Pitched roof ... 175mm rigid board insulation	0.15	0.15
Pitched roof with flat ceiling	0.11	0.16
External timber fame wall ... 150mm insulation quilt+30mm Celotex	0.17	0.17
Concrete floor ... 125mm insulation board	0.18	0.18
PVC framed doors and windows	1.4	1.4

See enclosed calculations for this project

SECURED BY DESIGN (SBD)...


Doors ... Front entrance doorsets shall be certificated to one of the following standards: ••PAS 24:2007 (Note 21.1.1) or WCL 1 (Note 21.1.2) Windows ... The SBD standards for ground floor, basement and easily accessible windows (Note 28.1.1) are as follows: ••BS 7950: 1997 or WCL 4 (Note 28.1.2) All windows must incorporate key lockable hardware unless designated as emergency egress routes,1 b

STRUCTURAL NOTES...

All structural timber to be grade C16 to BS 5268 unless otherwise specified by Structural Engineer. All lintols in timber frame: 3/220x45Dp timbers supported on double cripple studs at each end. All timber to timber fixings at bridles, beams etc. made using fully nailed joist hangers speedy type. Founds built off original subsoil soil bearing pressure 200kN.m2. Engineer informed of soft spots. Concrete grade C30 to BS 8500 parts 1&2.with min cement content 250kg/m3. Top of foundation 450mm min below finished ground level. 7N dense blockwork min density 1800kg/m3 and mortar designation (111) all to BS5628

STRUCTURAL ENGINEERS...

Design certificate and specifications for all steel and structural timber requirements to be adhered to. Steel work fabrication certificate or certificate of performance is to be provided. Roof truss manufacturers certificate is to be provided.

Client	Mr Tariq Purvaze	Address	71 Henderland Road, Glasgow G61 1JF	 KEITH EDWARDS ARCHITECT 2 CALEDON STREET, GLASGOW G12 9DX tel : 0141 341 0694
Project	House extension		Dwg	
Title	Specification...structure	Date	25.10.23	