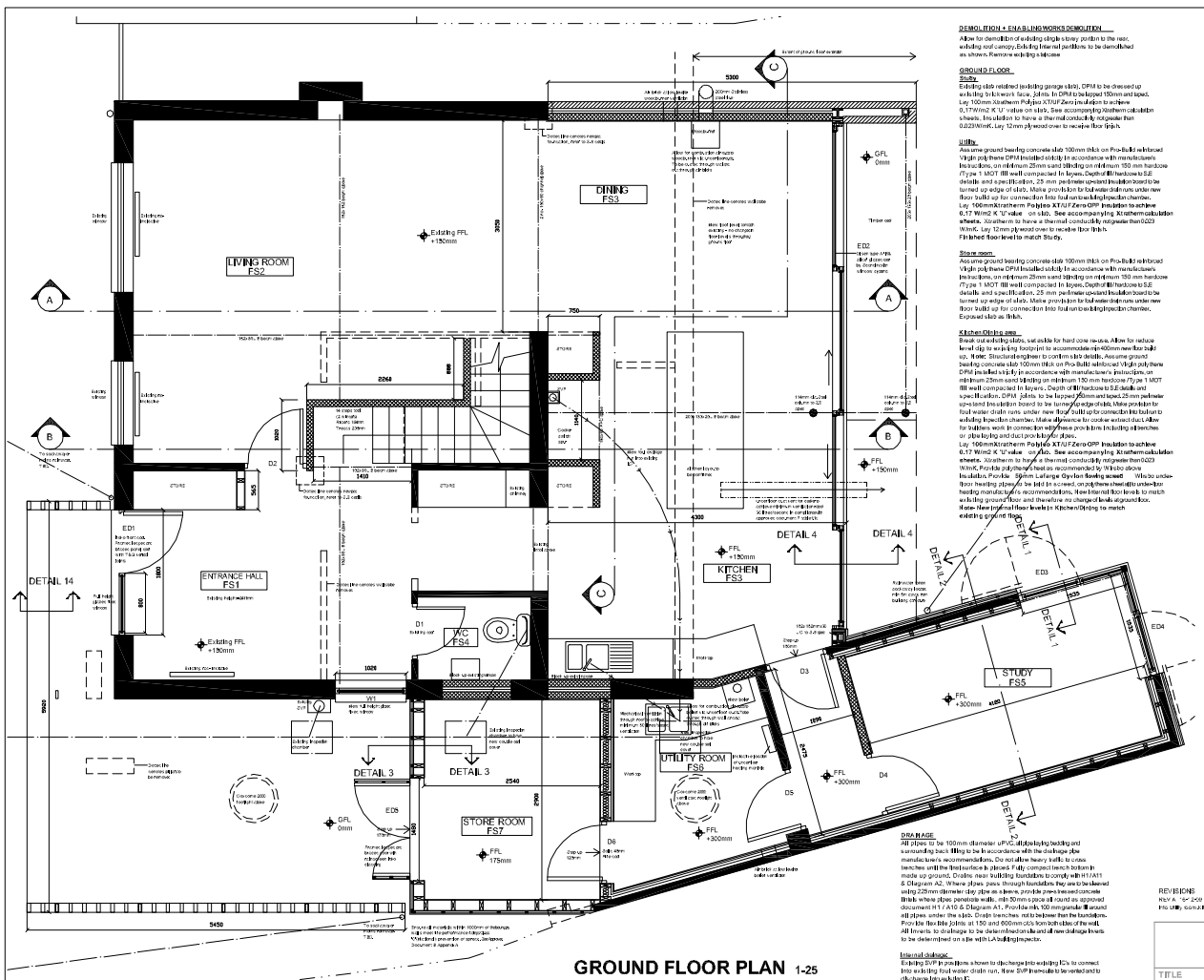


Note: All dimensions are structural unless otherwise stated

GROUND FLOOR PLAN 1-25

DEMOLITION + ENABLING WORKS DEMOLITION

Allow for demolition of existing single storey portion to the rear, including wall canopy. Existing internal partitions to be demolished as shown. Remove existing slipsaw

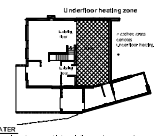
GROUND FLOOR

Study.
Existing slab retained (existing garage slab). DPM to be dressed up existing brickwork face, joints in DPM to be lapped 150mm and taped. Lay 100mm Xrathern Polyiso XTU/FZero insulation to achieve 0.17W/m2 K 'U' value on slab. See accompanying Xratherm calculation sheets. Insulation to have a thermal conductivity not greater than 0.023W/mK. Lay 12mm ply wood over to receive floor finish.

Utility.
Assume ground bearing concrete slab 100mm thick on Pre-Build reinforced Virgin polythene DPM installed solidly in accordance with manufacturers Instructions, on minimum 25mm sand blinding on minimum 150 mm hardcore /Type 1 MOT fill well compacted in layers. Depth of fill/hardcore to S.E details and specification. 25 mm perimeter upstand insulation board to be turned up edge of slab. Make provision for foul water drain runs under new floor build up for connection into foul run to existing inspection chamber. Lay 100mmXratherm Polyiso XTU/FZero OPP Insulation to achieve 0.17 W/m2 K 'U' value on slab. See accompanying Xratherm calculation sheets. Xratherm to have a thermal conductivity not greater than 0.023 W/mK. Lay 12mm ply wood over to receive floor finish.
Finished floor level to match Study.

Store room
Assume ground bearing concrete slab 100mm thick on Pre-Build reinforced Virgin polythene DPM installed solidly in accordance with manufacturers Instructions, on minimum 25mm sand blinding on minimum 150 mm hardcore /Type 1 MOT fill well compacted in layers. Depth of fill/hardcore to S.E details and specification. 25 mm perimeter upstand insulation board to be turned up edge of slab. Make provision for foul water drain runs under new floor build up for connection into foul run to existing inspection chamber. Exposed slab as finish.

Kitchen/Dining area
Break out existing slabs, set aside for hard core re-use. Allow for reduce level dig to existing footprint to accommodate min 400mm new floor build up. **Note:** Structural engineer to confirm slab details. Assume ground bearing concrete slab 100mm thick on Pre-Build reinforced Virgin polythene DPM installed solidly in accordance with manufacturers Instructions, on minimum 25mm sand blinding on minimum 150 mm hardcore /Type 1 MOT fill well compacted in layers. Depth of fill/hardcore to S.E details and specification. DPM joints to be lapped 150mm and taped. 25 mm perimeter upstand insulation board to be turned up edge of slab. Make provision for foul water drain runs under new floor build up for connection into foul run to existing inspection chamber. Make allowance for cooker extract duct. Allow for builders work in connection with these provisions including all trenches or pipe laying and duct provisions for pipes.
Lay 100mmXratherm Polyiso XTU/FZero OPP Insulation to achieve 0.17 W/m2 K 'U' value on slab. See accompanying Xratherm calculation sheets. Xratherm to have a thermal conductivity not greater than 0.023 W/mK. Provide polythene heat as recommended by Wilsonwave Insulation. Provide 50mm Lafarge Cryofloor floating screed. Allow for underfloor heating pipework be laid in screed, on polythene sheet in underfloor heating manufacturer's recommendations. New internal floor levels to match existing ground floor and therefore no change of levels in principle.
Note- New internal floor levels in Kitchen/Dining to match existing ground floor.



SURFACE WATER
Rainwater down-pipes to connect into existing soak-aways where possible. Any new soak-aways to be min 5m from any portion the building. Rainwater goods to be UPVC to match existing except where otherwise shown, eg: new cast iron gutters and downpipes to be milled finish aluminium by Alumasc.

FOUNDATIONS
See structural engineer's details and specification. Exact foundation design and depth to be determined on site with the local authority building inspector and structural engineer. Allow for new footings where S.E drawings dictate.

DPC's
All horizontal DPC's to be Hyload. Provide horizontal DPC 150mm above adjacent ground level as BS 743, ref C. **(A)** lapped with floor DPM, internal DPC to be 150mm min. above cavity. **(B)** External DPC to be 150mm above ground level. **(A)** Jambs to windows and doors to receive vertical insulated DPCs protruding 10mm into jambs and 25mm into cavity, as Damcor or similar.

EXTERNAL WALLS.

1) Masonry - where applicable
286.5mm cavity wall comprising of 102mm stock brick to match existing house, Inner leaf 100mm Thermalite Hi-strength 7 blockwork, 50mm (Kingspan TW50) partial cavity insulation, 25mm clear cavity incorporating sik wall ties with insulating retaining discs. @450mm vertical and 900mm horizontal centres. All walling below DPC to be two leaf of 102mm semi-engineering brickwork. Blockwork walls to be finished internally with 30mm Kingspan polyisocyanurate insulation and 12.5mm duplex grade plasterboard. Provide thermobate cavity closers to all reveals and weep holes at 450mm.

Wall insulation :	Thickness
1.External surface resistance	-
2.Brickwork facing	102mm
3.Vented cavity (full cav.75mm)	25mm
4.Kingspan Thermawall TW50	50mm
5.Thermalite blockwork	100mm
6.Kingspan polyisocyanurate lining	30mm
7.Plasterboard	12.5mm
8.Internal surface resistance	-

Upper resistance limit conduction=4.973 m.sq.K/W
Lower resistance limit of construction=4.084 m.sq.K/W
Correction for all gaps and fasteners= 0.000m.sq.K/W
U value of construction= 0.20 W/m.sq.K

2) Timber framed at 1st floor and Utility room
To achieve a minimum of **0.25 W/M.sq.K 'U' value.**
85x22 Iroko rainscreen cladding on 25x38mm softwood vertical battens on Tyvek breathable membrane on 12mm OSB board on 147mm timber studs with 100mm Kingspan Thermawall TW55 between studs. Fix 38mm Kingspan polyisocyanurate lining to studs, all joints to be Aluminium taped with 12.5mm Duplex Grade Plasterboard lining to receive 3mm slim coat.

Wall insulation :	Thickness
1.External surface resistance	-
2.Cladding	22mm
3.Wall vented air layer	25mm
4.Tyvek breathable membrane	0.2mm
5.OSB Board	12mm
6.Kingspan Thermawall TW55	100mm
7.Kingspan polyisocyanurate lining	38mm
8.Plasterboard	12.5mm
9.Internal surface resistance	-

Upper resistance limit conduction=3.241 m.sq.K/W
Lower resistance limit of construction=2.987 m.sq.K/W
Correction for all gaps and fasteners= 0.000m.sq.K/W
U value of construction= 0.21 W/m.sq.K

3) Timber framed at store room (insulated)
85x22 Iroko rainscreen cladding on 25x38mm softwood vertical battens on Tyvek breathable membrane on 12mm OSB board on 147mm timber studs filled with 12mm plywood.

4) Timber framed for existing garage masonry wall at Study and utility room
To achieve a minimum of **0.25 W/M.sq.K 'U' value.**
85x22 Iroko rainscreen cladding on 25x38mm softwood vertical battens on Tyvek breathable membrane on 12mm OSB board on existing masonry 100mm brickwork. Fix 75mm timber studs with 75mm Kingspan Thermawall between studs. Fix 38mm Kingspan polyisocyanurate board lining to studs, all joints to be Aluminium taped with 12.5mm Duplex Grade Plasterboard lining to receive 3mm slim coat.

Wall insulation :	Thickness
1.External surface resistance	-
2.Cladding	22mm
3.Wall vented air layer	25mm
4.Tyvek breathable membrane	0.2mm
5.OSB Board	12mm
6.Kingspan Thermawall	75mm
7.Kingspan polyisocyanurate lining	38mm
8.Insulated plasterboard	12.5mm
9.Internal surface resistance	-

Upper resistance limit conduction=3.407 m.sq.K/W
Lower resistance limit of construction=2.810 m.sq.K/W
Correction for all gaps and fasteners= 0.000m.sq.K/W
U value of construction= 0.24 W/m.sq.K

Note: Existing face brick on boundary to be retained for Study and Utility areas. Walls here to be dry-lined internally with 75mm timber studs with 75mm Kingspan Thermawall between studs. Fix 38mm Kingspan polyisocyanurate board lining to studs, all joints to be aluminium taped with 12.5mm duplex Grade Plasterboard lining to receive 3mm slim coat.

DRAINAGE
All pipes to be 100mm diameter uPVC, all pipe laying bedding and surrounding back filling to be in accordance with the drainage pipe manufacturer's recommendations. Do not allow heavy traffic to cross trenches until the final surface is placed. Fully compact trench bottom in made up ground. Drains near building foundations comply with H1/A11 & Diagram A2. Where pipes pass through foundations they are to be sleeved using 225mm diameter clay pipes as sleeves, provide pre-trussed concrete lintels where pipes penetrate walls, min 50mm space all round as approved document H1 / A10 & Diagram A1. Provide min. 100 mm granular fill around all pipes under the slab. Drain trenches not to be over run the foundations. Provide flexible joints at 150 and 600mm c/c from both sides of the wall. All inverts to drainage to be determined on site and all new drainage inverts to be determined on site with LA building inspector.

Internal drainage
Existing SVP in pipe runs shown to discharge into existing ICs to connect into existing foul water drain run. New SVP in new stack to be vented and to discharge into existing IC.
WC = 110mm uPvc SVP min 18mm/m
Basin = 32mm uPVC 75mm deep seal trap 50mmm
Shower = 38mm uPVC 75mm deep seal trap 50mmm
Kitchen sink = 40mm uPVC 75mm deep seal trap.
Bath = 40mm uPVC 50mm deep seal trap

REVISIONS
Rev A - Sep 2008 - Notes for wood s.m.e.s added as revision of stick ventilation repeated. Info utility room kitchen and entrance notes added. Utility room entrance door corrected

TITLE	DWG NO.	REV.	SCALE
Ground floor plan	161-L-02	A	1-25@A1
ADDRESS			