



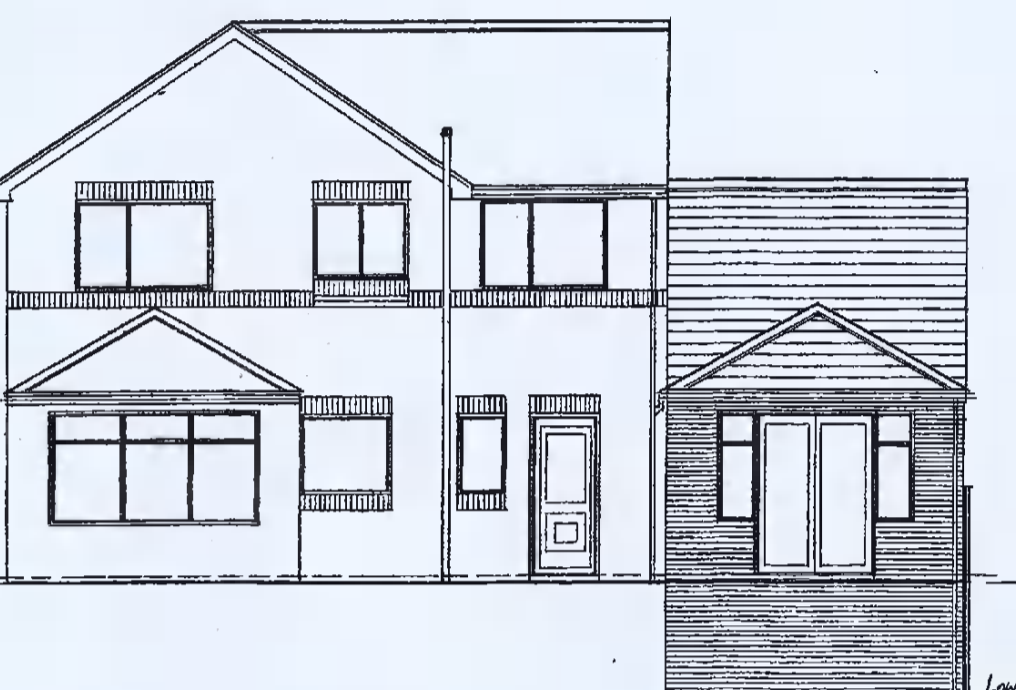
EXISTING FRONT ELEVATION



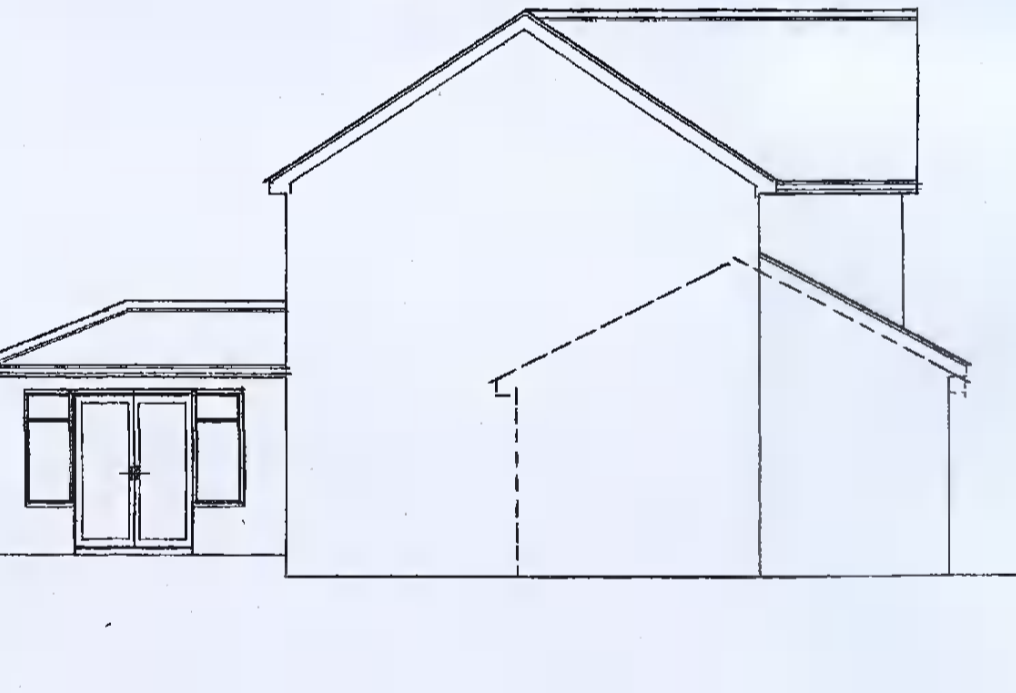
PROPOSED FRONT ELEVATION



EXISTING REAR ELEVATION



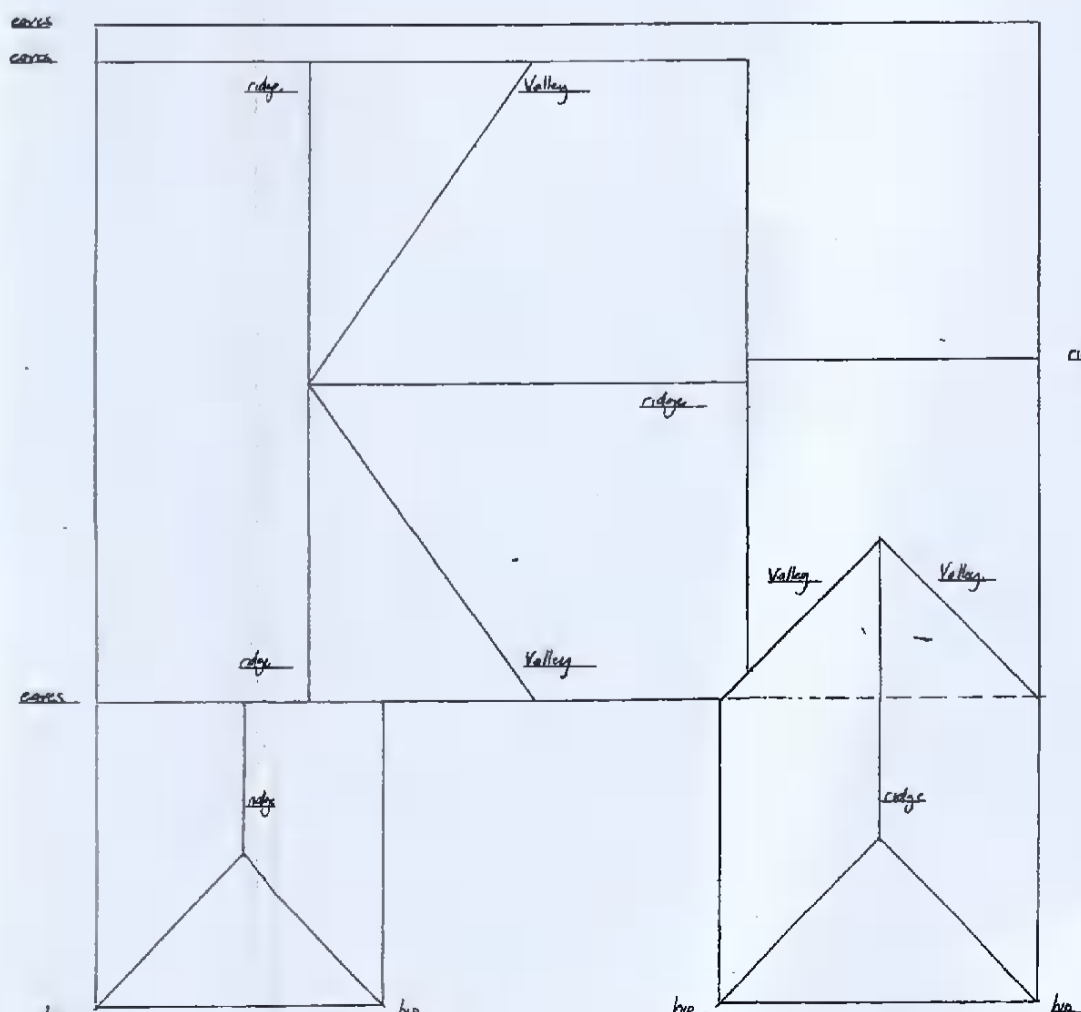
PROPOSED REAR ELEVATION



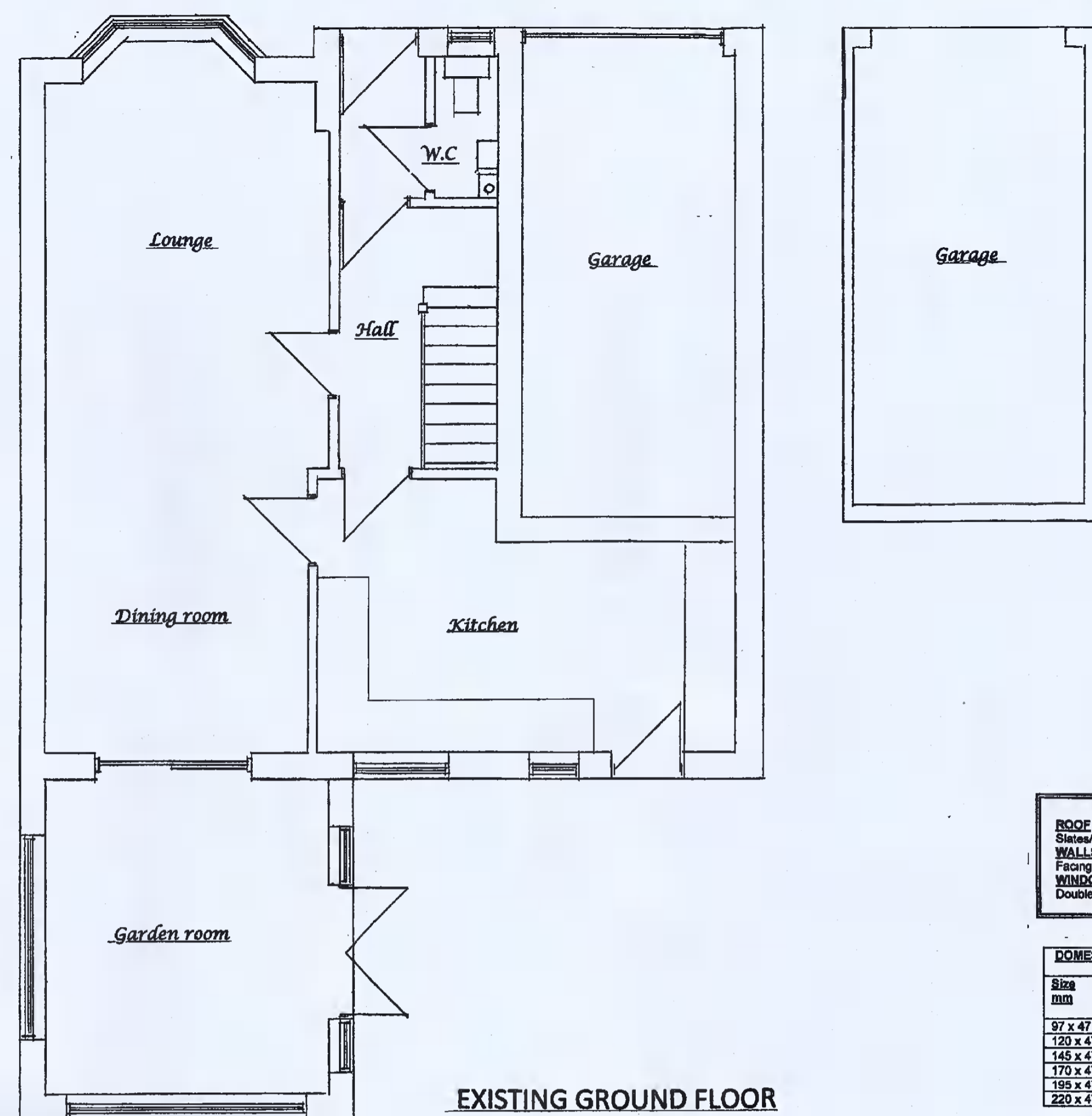
EXISTING END ELEVATION



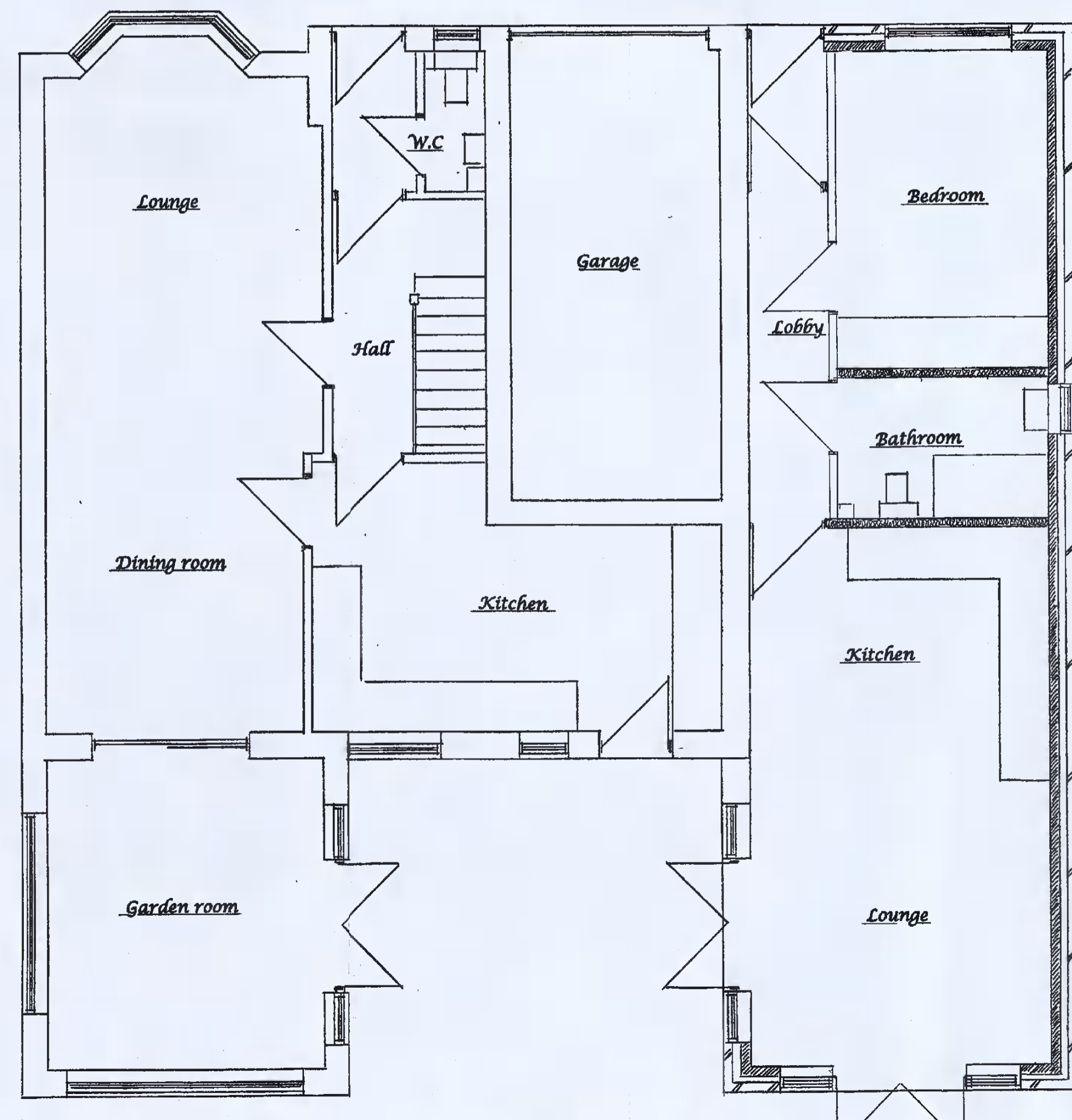
PROPOSED END ELEVATION



PROPOSED ROOF PLAN 1:100



EXISTING GROUND FLOOR



PROPOSED GROUND FLOOR

ROOF MATERIALS		
Roof	Slates/tiles to match existing	
Walls	Facing bricks to match existing	
Windows	Double glazed white PVCu	

DOMESTIC FLOOR JOISTS SPANS			
Size mm	Centre mm	Max spans m	
		150mm	200mm
97 x 47	400/450	1.59 / 1.82	
120 x 47	400/450	2.52 / 2.42	
145 x 47	400/450	3.04 / 2.92	
170 x 47	400/450	3.65 / 3.42	
192 x 47	400/450	4.07 / 3.91	
220 x 47	400/450	4.68 / 4.39	

WALLS Inner stud to existing solid wall
NOTE
 The walls are to be inspected and any defective stonework taken down and replaced with new. All joints are to be raised out & repointed in sand/mortar. The existing precast concrete lintels & clims in the buildings are to be replaced with natural stone to match the existing as near as possible, over the larger openings, provide Castic CNZ 95C lintels or 150mm mild steel galvanneal angles behind the stone heads
 50/100mm cavity depending on projections in the outer leaf
 100 x 50mm sw studs @400mm c/c with 75mm Kingspan Kooltherm ThermaWall TW55 or similar insulation between supported in place with 25 x 25mm sw bearers
 The studs are to be directly under the floor joists
 12mm Sterling boards glued & screwed to the face of the studs
 500g Vaqueque vapour barrier
 25mm Kingspan Kooltherm ThermaWall TW55 or similar insulation to the outer face of the sterling board
 12.5mm plasterboard
 Skirtings to clients choice & design
 U value 0.18W/m²K
NOTE
 If required the inner stud can be fixed to the outer leaf with wall ties

GROUND FLOOR suspended timber
 18mm T & G Weyroc (15 Kg/m²) or sw flooring on 150 x 47mm sw joists @ 450mm c/c on 100mm honey combed sleeper walls at 2m c/c built off the concrete thickened up to 150mm
 Provide 150mm Kingspan Kooltherm K3, insulation between joists supported on 50 x 35mm sw battens nailed to the side of the joists
 The floor joists are to be supported on post hangars to the external walls
 100mm overcrete concrete on 100mm hardcore
 Overcrete concrete is to be level or above adjacent gl 150mm gap from top of overcrete to underside of the floor
 Provide 225mm x 150mm air brake ducted through the cavity with a stepped dpc over @ 1.00m c/c
 Maximum ventilation to existing timber floor
 If the existing floor is concrete a 1200g Vaqueque dpm is to be laid under the over site concrete
 U value 0.18W/m²K

MECHANICAL EXTRACTS
 Provide mechanical extracts direct to open air in the following rooms -
 Bathrooms 15 litres / sec
 Bathrooms without windows 15 litres / sec
 The extract fan is to be connected to the light switch & have a 15mins overrun, provide 10mm gap under the door for ventilation
 Kitchens 30 litres / sec
 Utility room 30 litres/sec
 Where the sanitary accommodation is internal provide a 10mm gap under the door
 In any room without windows the extract fan is to have a 15mins overrun
 All extract ducts are to be fitted with condensation traps & wrapped in 25mm Kingspan Kooltherm[®] Duct insulation or similar when passing through unheated areas & outside
 Extract fans are not to discharge over the boundary

FOUNDATIONS (subject to ground conditions)
 Minimum depth 600mm from the lowest ground level
 Foundations to BS 8004 1988
 800 x 300mm concrete reinforced with C28 mesh 40mm from bottom
 800 x 400mm offset foundations to boundary reinforced with two layers of C28 mesh 40mm from top & bottom
 Where drains are adjacent to the foundations the bottom of the foundation should be level or below the invert of the drain
 Foundations to internal walls to be 800 x 300mm
 The minimum overlap of the stepped foundations is to be twice the height of step, or thickness of foundation, or 300mm, whichever is greater
 For trench fill foundations, minimum overlap is to be twice height of the step, or 1 metre, whichever is greater
 Concrete for the foundations to be GEN 3 mix to BS 5328
 20 mm aggregate
 75 mm slump for strip foundations
 125mm slump for trench fill
 If the foundations are within an area of mm workings the foundations should be reinforced with A193 mesh (3.02 kg/m²) 40mm from the top & bottom

NOTE
 Unavailable load bearing strata will necessitate a separate structural design

WINDOWS & DOORS
 The windows to each room should provide adequate purge ventilation
 For a window, that opens 30° or more the area of the opening part of the window should be at least 1/20th of the room's floor area. For a window that opens between 15° and 30° the area of the opening part of the window should be at least 1/10th of the room's floor area. Windows that open less than 15° are not suitable for purge ventilation
 The opening light is to be at least 1.7m above floor level
 Windows to habitable rooms are to have 10000mm² vents
 Windows to other rooms are to have 4000mm² vents
 All windows & doors are to be double-glazed (16mm gap) with Pilkington K glass, be fully draught proofed, have an energy rating of C or better or a max U value of 1.4W/m²K
 To prevent air leakage the window frame is to overlap the lintel insulation 30mm provide a flexible mastic sealant between the window frame, sill board & the external plaster finish
 Windows to sanitary accommodation are to be glazed in obscure glass
 All glazing in doors, windows is to be in accordance with BS 6262 & BS 6208 1981
 Laminated glass is to be installed in the following locations -
 • All windows within 800 mm of floor level
 • 300mm either side of a door opening i.e. in a side screen up to a height of 1.5m above floor level
 • In a glazed door up to a height of 1.5m
 • All such areas of glass to be permanently marked with the relevant British Standard
 All windows above ground floor level are to be escape windows with an unobstructed openable area of at least 0.23m² & at least 450mm high x 450mm wide (the route of escape through the window can be at an angle instead of straight through). The bottom of the openable area should be not more than 1.1m above floor level
 The window is to be min 800mm & max 1100mm from floor level
 The windows are to achieve an average U value of 1.8 W/m²K
 Where an inner room is formed, provide an escape window with an unobstructed openable area of at least 0.33m² & at least 450mm high x 450mm wide (the route of escape through the window can be at an angle instead of straight through). The bottom of the openable area should be not more than 1.1m above floor level
 The window is to be min 800mm & max 1100mm from floor level

PATIO DOORS
 The bi-folding patio doors are to achieve a U value of 1.4W/m²K or better, the windows are to be double-glazed (16mm gap or better) with Pilkington K glass & be fully draught proofed

LINTELS
 Lintels are to be Birtley CB 90 HD (ok for 100mm cavity) or similar at ground floor level. Lintels are to have 150mm end bearing & be reinforced to give 1/2 hr fire resistance. All lintels to external walls are to be reinforced & have the ends closed with dpc

WASTES
 40mm dia to Bath, Shower & sink unit
 32mm dia to whb & bidet
 50mm dia combined wastes
 All fittings to have 75mm deep seal traps
 Svp is to be 100mm dia & terminate 900mm above any window head & be fitted with a wire cage

DRAINS
 The existing drains under the proposed extension are to be renewed
 Grab up any redundant drains
 All new drains to be 100mm dia PVC-U to BS EN 1404-1-1998 surrounded in 150 mm pea gravel & laid in a self-cleaning fall of 1:40
 Any drains under the building to be encased in 150mm concrete
 New manholes to be constructed in 225mm recycled class engineering bricks on 150mm concrete base. Manholes deeper than 1m are to have metal step irons or fixed ladders
 Or
 Prefabricated plastic manholes conforming to BS EN13598-1 or 2 or equivalent independent approval. Maximum depth 3.0m
 Manholes made the building are to have sealed screwed down covers
 Where the drains pass through walls the foundations are to be stepped under & the brickwork supported over with precast concrete lintels. The void filled in with compressible filler & provided with a vermin screen
 All gullies are to be back inlet & trapped
 Where saw water drains branch provide rodding access gullies
 Provide adequate protection to both the existing & new installed foul & surface water drains
 The builder is to ensure that the drains are connected into the correct system

ROOF BRIMS nailed trusses
 Slates or tiles to match existing on 25 x 60mm sw tie battens
 Tie battens are to conform to BS 5534 2003
 Tylek Supro Plus or similar breather underlay to BS 5534, Part 1 2003
 Roof trusses and associated bracing to be in accordance with BS 5268 Part 3 1998
 Provide 97 x 22mm longitudinal & diagonal wind bracing to all rafter joints
 Fix trusses to wallplate with clips
 100mm mineral wool insulation between & 200mm lead across the top of the trusses, ensuring that the insulation is continuous with the wall insulation to avoid cold bridging
 12.5 mm plasterboard & skm
 100 x 50mm sw wall plate
 100mm sw or PVC-U fascia, 12.5 mm exterior ply or PVC-U soffit
 100mm hr gutters, 63 mm dia rupa
 Provide Radiamd or similar verite at eaves for roof space ventilation
 175 x 33mm sw layboards to valleys with code 4 lead
 Code 4 lead & stepped dpc to all abutments
 Code 4 lead flashing to the chimney stack
 All trusses to be fixed to manufacturers detailed specification
 Roof trusses and associated bracing to be in accordance with BS 5268 Part 3 1998
 Roofing to be in accordance with BS 6534 part 1, 2003 & BS 8000 Part 6 1990
 Access hatch to be insulated
 U value 0.18 W/m²K

ROOF BRACING
 The bracing to be in accordance with BS 5268 Part 3 1998
 Wind bracing is to be 97 x 22 mm to all rafter points, nailed to the trusses with 2 no 3.35 mm dia x 75mm long wire nails
 The bracing is to be lapped as required over at least two trusses & fixed with 2no 3.35 mm dia x 75mm long wire nails
 Longitudinal bracing are to be fixed to all trusses of the same type & to be fixed to at least two adjacent trusses of the next type whenever possible
 Longitudinal bracing are to be fixed to gable & party walls
 Secure gable trusses to wallplate with 2 no 3.35mm dia framing anchors
 Internal walls are to be stepped below the underside of the truss bottom chord to allow adequate gap for truss deflection
 Any water tanks are to be supported on the trusses in accordance with the TPA Technical Handbook
 Proprietary hangers, anchors & fixings to be used in accordance with manufacturer's instructions
TRUSSES ARE NOT TO BE CUT, NOTCHED OR DRILLED WITHOUT PRIOR APPROVAL FROM THE MANUFACTURER

LATERAL RESTRAINT / HOLDING DOWN STRAPS
 Provide 30 x 5 x 1.2m long mild steel straps @ 1.2m c/c to the following members:
 A) Wall plates
 B) End three trusses or rafters adjacent to the gable (provide sw negrags between members to support straps)
 C) Floor joists parallel to walls (straps over three joists)

ROOFS GENERAL NOTES
 If possible small sections of tiles are to be avoided, using double tile & a half or half tiles where available to reduce the use of small cut tiles
 When using interlocking concrete tiles consideration is to be given to the verge detailing, cut tiles at this location should be kept as large as possible & fixed to avoid wind uplift

VERGES
 Plain tile cuts are to be avoided, purpose made plain tile & half should be used
 Small sections (less than one tile width) of cut single-lapped interlocking tiles should not be used
 Natural slate verges are to be formed with full slate & either slate & a half or half slates that are a minimum 150mm wide
 All tiles & slates are to be mechanically fixed at the verge in accordance with Appendix 7.2 - A NHBC standard chapter
 Natural slates are to conform to BS EN 12326-1
 When laying tiles below 16° pitch Klobber Permo or similar parking felt is to be used

WALLS, DRY LINTLS
 100mm cavity filled 50mm Celotex CG6000 PIR insulation (0.021), 50mm Low-E cavity
 100mm Thermaflex should block inner leaf
 3mm plaster skm, 12.5mm plasterboard and 25mm Celotex PL4000 PIR insulation (offering 0.022 U-value) plus 15mm minimum plaster date cavity
 Insulation to be taken to the top of the cavity
 Close cavities at the jamba with insulated cavity closure with a minimum thermal resistance of 0.45m²KW the insulation core of the closer to be not less than 25mm thick
 Horizontal dpc 150mm above gl
 Horizontal & vertical dpc to all openings
 Bond brick to existing & maintain cavities
 Stainless steel wall ties to PD5697 2010 5no per m²
 Posttensioned 450mm c/c vertically & at 750mm c/c horizontally
 Within 225mm of unbonded jamba the centres are to be reduced to 300mm c/c vertically
 Where the ground level is higher than the ground floor level provide Butabene tanking lapped into the dpc
 All materials below gl are to be frost resistant
 Fill cavities up to 225mm below the lowest dpc
 U value 0.18W/m²K

INTERNAL WALLS
SOLID
 100 mm block walls, block mass to be 120 kg/m² or Thermaflex block, mass of 80kg/m² Plastered & built off 450 x 225 mm concrete foundations depth as main foundations. Lintels over openings to be Naylor or similar precast concrete

STUD WALLS
 75 x 50mm sw or metal studs @ 600mm c/c with 25mm Rockwool Acoustic slabs between (mm) 15mm plasterboard & skm both sides Double joists under stud partitions at first floor level
 R_s 40dB
PRECAST CONCRETE LINTELS
 Concrete to BS 5328 1981 designed max not less than RC 30 or designed max not less than C 30, maximum nominal size of aggregate 20 mm
 Lintels are to be bedded on a full mortar joint with the following end bearings:
 100mm for openings up to/including 1.00m
 150mm for openings up to/including 3.00m
 200mm for openings over 3.00m
 Oversteering of the masonry at supports is to be avoided
 Lintels are to be installed as directed by the manufacturer with the reinforcement strand (visible from the end faces) on the bottom of the unit
 It is important that lintels are installed the correct way up & stored on site in a similar manner with adequate support
 Exposed faces are to be fair faced
 Provide a 150 mm stepped dpc over inner & outer lintels where the lintel is used in an inner leaf situation
 In cavity construction both the internal & external leaves of brickwork are taken up uniformly
 For spans over 1.2m it is good practice to provide temporary support at 1.2m centres. Lintels supporting a concrete floor or masonry above are to be supported on a 225mm recycled class engineering bricks on 150mm concrete base. Manholes deeper than 1m are to have metal step irons or fixed ladders
 Lintels may be cut using a high-speed disc cutter, taking due care to current Health & safety regulations

SCALE
 0 1 2 3 1:50
 0 2 4 6 1:100

PROPOSED SIDE AND REAR
 SINGLE STOREY EXTENSION
 To 25 PENSRAW VIEW
 SACRISTON for
 Mr and Mrs JACKSON
 SCALE 1:50, 1:100