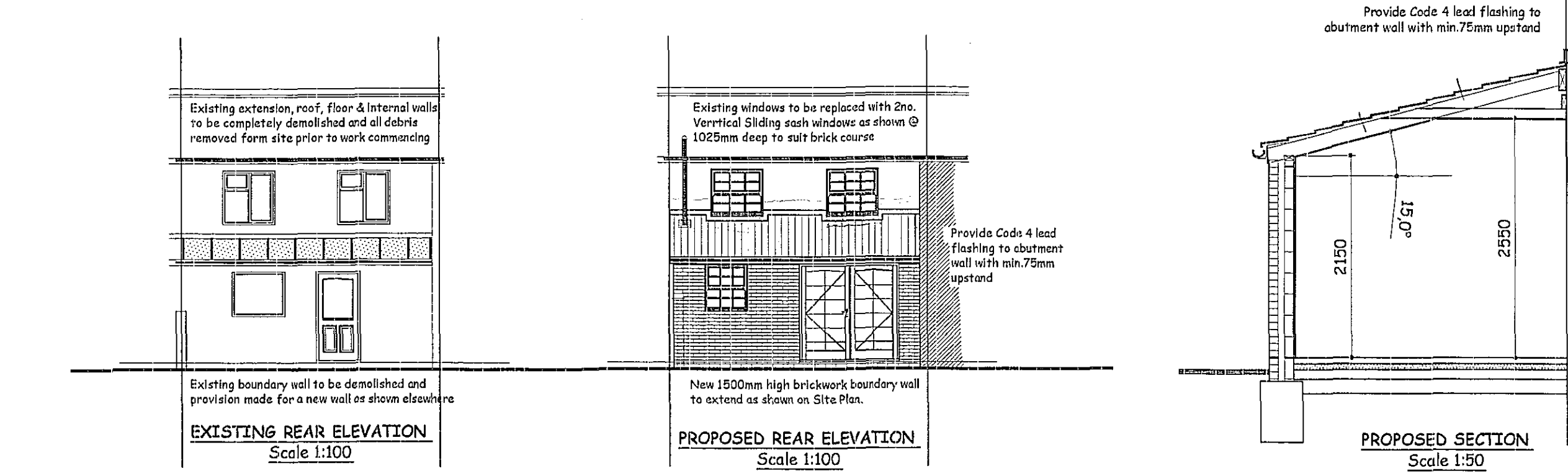
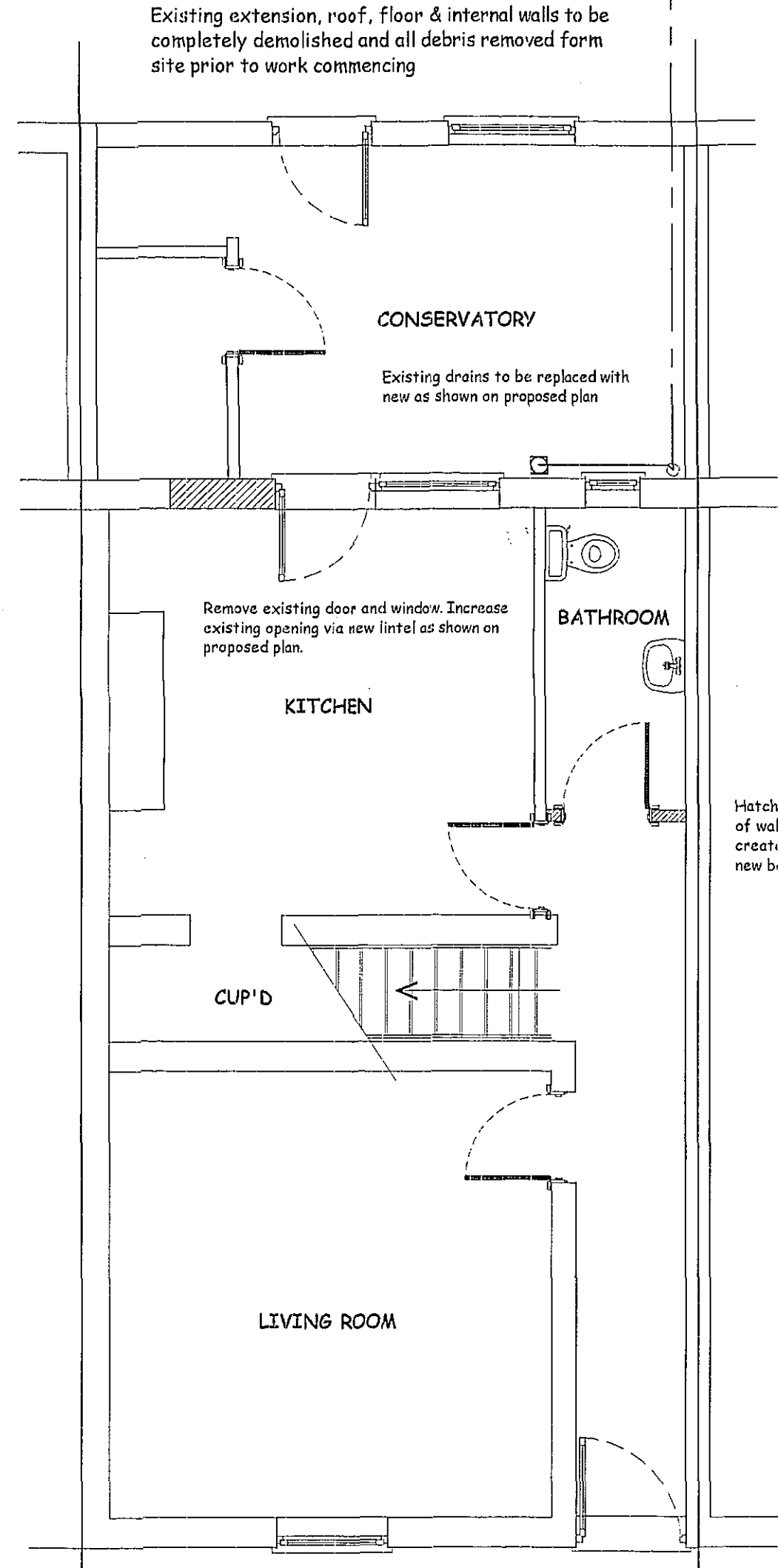


Contractor to check all Dimensions on site prior to ordering materials / commencing work.Do Not Scale from this Drawing - If in doubt then please ask



ELECTRICAL INSTALLATION
All electrical work required to meet the requirements of Part P must be designed, installed, inspected and tested by a person competent to do so. Prior to completion of the works the council Building Control Officers must be satisfied that either:
1. An electrical installation certificate issued under a competent persons scheme has been issued or
2. An appropriate electrical installation certificate has been issued for the work, and that it has been signed by a person competent to do so. The Engineer is to advise if any appliance or position of appliance does not conform to regulations. Contractor to seek advice from Client with regard to lighting requirements.

SMOKE ALARMS
To be self contained, interconnected and wired to a separately fused circuit with a battery back up. Smoke alarms to be fitted to u/side of plasterboard ceiling to the ground floor max 7m from the kitchen / lounge and to be max. 3m from any bedroom door. All alarms to be strictly in accordance with BS 5446 and to be wired that when one alarm is triggered all alarms are activated.

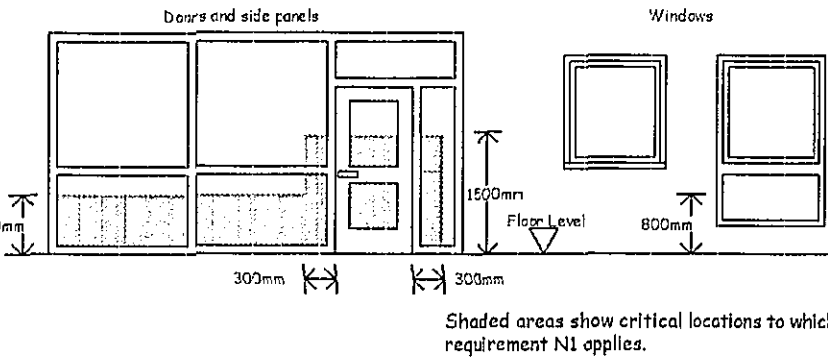


WASTE SIZES FOR NEW PLUMBING
All new plumbing to have the following waste sizes
W.C.=100mm a Multikwik or similar approved
W.H.B.=32mm a uPVC with 75mm Deep sealed trap
SINK=40mm a uPVC with 75mm Deep sealed trap
SHOWER=40mm a uPVC with 75mm Deep sealed trap
Provide access points to all changes in direction. Provide anti-siphon traps where pipe runs exceed 3m and W.H.B pipe run exceeds 1.8m.

NOSEINGS
Fix min. 38x38mm timber nogging to all potential loose plasterboard ceiling edges and light fittings. Position of light fittings to be advised by client on site.
INTERNAL JOINERY, SKIRTINGS & ARCHITRAVES
All internal finished timber to be free from all defects and to clients approval prior to ordering any materials.

ROOF INSULATION - SLOPED CEILING (UNDER RAFTER)
The whole area of the ceiling to be insulated with 25mm thick Multi Layer Tri Iso Super 9 Insulation to achieve a 'U' value of 0.19w/m²K fitted strictly in accordance with manufacturers instructions.
1. Unroll the insulation preferably vertical, starting from the top of the roof.
2. Staple the insulation product at 500mm ctrs on the u/side of the rafters.
3. Overlap the widths by min. 50mm and max. 100mm and tape joints with approved tape.
4. At the bottom of the roof slope, staple the insulation directly to the wallplate.
5. Nail 25mm thick cross battens to the rafters to create 25mm cavity / ventilation gap through the insulation and then attach p'board.
Roof Insulation 'U' Value Calculation sheet available on request

ROOF VENTILATION
Install Tyvek® or similar approved Breathable Membrane in accordance with manufacturers instructions which are briefly described below & BBA certificate 99/3635 (fourth issue) breather membranes in non-ventilated pitched roofs of any plan, any shape or any size under all types of roof coverings including tight jointed and fully interlocking tiles and synthetic slates. Installing Tyvek® underlay in accordance with the above certificate will enable a roof to meet all the requirements of the Building Regulations.
Installation Guidelines
Tyvek® SUPRO should be installed with min. 150mm overlaps of a standard bituminous felt underlay and secured with stainless steel staples or large headed galvanised clout nails.
Eaves:
There is no need to provide any vents into the loft at eaves, because a Tyvek® non-ventilated roof system does not rely upon air movement beneath the membrane to avoid damage by condensation. To avoid water ponding behind the fascia of closed eaves and to prevent prolonged exposure of the membrane to ultra-violet radiation, use a Tyvek® Eaves Carrier. Stap the membrane short of the fascia and lap it onto the Eaves Carrier. Pack closed eaves with fibrous insulation to reduce thermal bridging.
Valley detail:
Lap the Tyvek® underlay 50mm onto the gable or rafter rying.
Extend the Tyvek® underlay 150mm from each slope and overlap it at the ridge/hip line. There is no need to provide vents at the ridge.
Valley detail:
Extend the Tyvek® underlay from each slope by 150mm beyond the valley centre line and seal the lap using Tyvek® Butyl Tape to form a watertight seal.
Abutments:
Turn up the Tyvek® underlay beneath flashings not less than 50mm.
Penetrations:
Seal around all penetrations using Tyvek® Butyl Tape.



BLOCK COMPARISON TABLE (to achieve a 'U' value of 0.19w/m ² K)		
Manufacturer	100mm thick Block type	Full Fill Cavity insulation thickness
Thermalite	Shield	65mm
Plascon	Fibolite	85mm
	Agilite	85mm
	Stratelite	85mm
Termac Topblock	Plascon	100mm
	Hemelite	85mm
	Lignacote	85mm
	Tapcrete	100mm
	Durox Supabloc	65mm

Note: The detail shown is a typical constructional method for mans pitch roof abutments. This detail should be adapted to suit specific site conditions and always to the satisfaction of the Building Inspector.

FOUNDATIONS
Existing building area to be stripped of all vegetable matter and rubbish to a min. depth of 150mm before excavation commenced. Concrete mix for foundations to be BS13 in accordance with BS5328:1981. Foundations to external wall to be min 700mm wide x 225mm deep. Excavate down to solid firm strata is 750mm deep (min 1000mm if soil is of a shrinkable nature). Exact depth to suit conditions on site and to the strict approval of the L.A. Building Inspector. Any irregularities in subsoil during excavation to be brought to the immediate attention of the Building Inspector & advice to be sought from a Chartered Structural Engineer.
WALLS BELOW D.P.C.
In a course of Class B brickwork & 2no. courses of Red Engineering brickwork below D.P.C. on outer face and In a course of 7N/mm² on inner skin of cavity face. Elsewhere to be either 7N/mm² concrete blockwork or full width trench blocks. Both to be within 225mm of D.P.C. level. Cavity to be filled to within 225mm min. of below D.P.C. with lean concrete mix.
GROUND FLOOR
65mm mortar screed with a light gauge reinforcing chicken wire on 500 gauge polythene separating layer on a 60mm Celotex Double R GA3000Z rigid insulation board or similar approved, provide 30mm thick perimeter insulation between screed and floor insulation upto d.p.c. level on 100mm thick GEN3 concrete sub-floor on a 1200 gauge DPM lapped onto D.P.C. within walls on min. 150mm clean and well compacted hardcore. Depth of hardcore must not exceed 600mm and must be compacted in 150mm thick layers. All service entries to be sealed with pressure sensitive tape. Floor to achieve a min 'U' Value of 0.25w/m²K.
Floor Insulation Installation guidelines (under screed)
1. Install a Damp Proof Membrane (DPM) below the slab OR apply a liquid waterproofing material to the top surface of the slab.
2. The DPM must provide continuity with D.P.C.s installed within the surrounding walls.
3. Level the surface of the slab; it should be smooth and free of projections.
4. Use a thin sand blinding on a rough tamped slab to ensure that boards are continuously supported. Cut strips of board at upstands to fit around floor perimeters to eliminate heat bridging at screed edges.
5. Upstand depth should equal the sum of the slab insulation and screed thickness.
6. The upstand thickness should not exceed the combined thickness of wall plaster and slurrings.
7. Lay boards directly onto the prepared slab, cutting infill boards as required. Joints must be tightly butted. The use of a polythene vapour control layer over the insulation is recommended by the BRE to minimise the risk of condensation forming at the insulation/slab interface.
8. Apply a sand/cement screed over the GA3000Z boards to a minimum thickness of 65 mm. Use scaffold boards or other protection to prevent wheelbarrows and other traffic damaging boards.
9. Allow screed to dry thoroughly before an impermeable surface, such as a vinyl floor finish, is applied.
10. These recommendations are suitable for normal domestic floor loadings. If higher loadings are required it may be necessary to increase screed thickness and provide reinforcement within the screed.
Installation guidelines (under slab)
Insulation under the slab must have: Level and well blinded hardcore. DPM (Damp Proof Membrane) placed under insulation. Insulated upstand > thickness of slab + screed. DPM continuous with the D.P.C.s. Vapour control layer (e.g. 1000 g polythene) laid directly over insulation.
DAMP PROOF COURSE (D.P.C.)
Horizontal heavy duty polythene DPC "Hydrol" or similar approved to all walls in accordance with BS 6519 and set min. 150mm above all external ground levels. D.P.C. in walls must be linked / lapped with DPM in ground floor. Provide performed cavity wall trays above windows & doors with weep vents at a max of 2m centres with a min of 2no per opening.

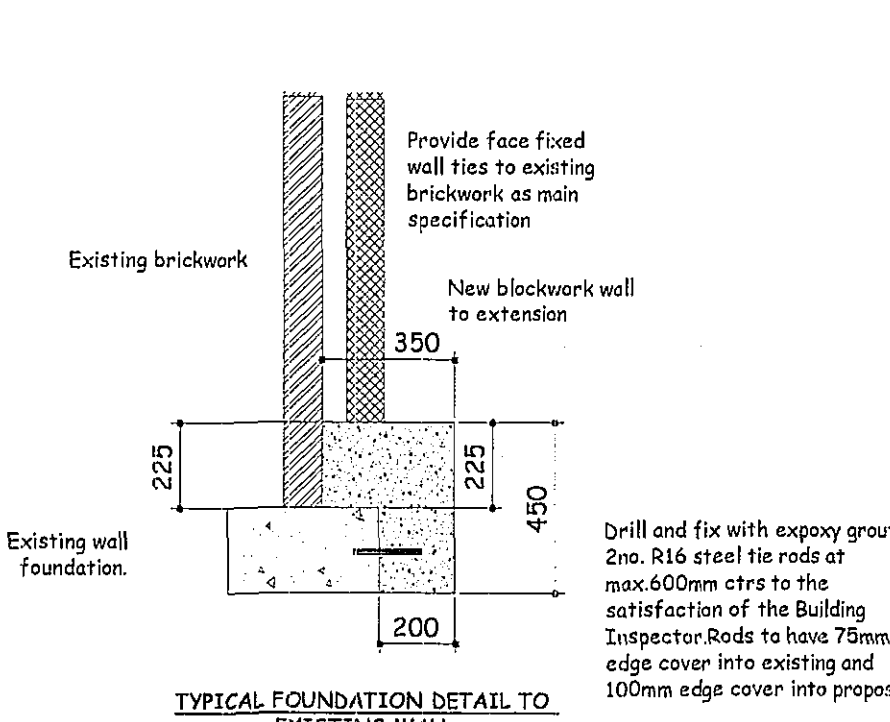
New I.C. less than 650mm deep and only one through connection to be 255mm and I.C. between 600mm and 1000mm deep to be 450mm Ø uPVC Osma or equal approved. I.C. over 1000mm deep to be 1200x750 on 150mm C20P concrete base with 215mm Class B brick walls with Grade B medium duty cover.
All external lights except garages to have a sensor which will extinguish the light when there is enough daylight and when not required at night.
Fit 15L/sec extractor fan to Bathroom ducted to external air.
SVP to be fully boxed in with reddable access. Pipe to terminate 900mm above opening window and fitted with stat'1 birdcage. Solid fill around pipe with mineral fibre insulation.
Tie new blockwork to existing with 'Strong Tie Connectors' or similar approved.

HEATING SYSTEM
Provided from existing but all radiators are to be fitted with thermostatic radiator valves. All space heating pipework located outside the building fabric insulation layers to be wrapped with insulation material having a thermal conductivity at 40°C not exceeding 0.035 W/m²K and a thickness equal to the outside diameter of pipe upto max. of 40mm. It should be noted that control heating and hot water pipework in unheated areas may need increased insulation thicknesses for the purpose of protection against frost, refer to BRE Report No. 262 2002 Edition.
MASONRY WALL CONNECTORS
Provide Simpson Strong - Tie or similar approved wall connectors to connect new & existing brick / blockwork. Use all specified fasteners. Fasteners must be spaced evenly, unless otherwise specified, and installed into the existing bricks or block and not into mortar joints. Insert wall ties provided at maximum 300 mm centres, bedding the ties into the mortar joints. Detailed site work instructions are provided with each wall connector system and must be adhered to at all times. In exposed locations it may be necessary to incorporate additional protection, for example the insertion of a vertical dpc.

LATERAL RESTRAINT STRAPS
Tie roof structure to blockwork wall with 30X5 galvanised mild steel straps at max 1.8m ctrs where rafters and ceiling joists run parallel to blockwork walls. Also fit at max 1.8m ctrs to anchor wallplate to blockwork wall with min 3no. Fixings per strap. Horizontal lateral restraint straps should be spaced not more than 2m centres and attached to at least 3 timber members through the use of nogging and packing. Attach to timber members with four steel screws or four 4mm x 75mm round nails for roofs and two into each joist for floors. The turn down should be 100 mm at the centre of an uncut block or brick. Vertical restraint strapping should be at least 1m long. Where straps are fixed to masonry, hardened nails 85W/G x 75 mm long or wood screws into plugs No 12 x 50 mm long should be used. The number of fixings should be in accordance with the design plans and the lowest fixing should be located within 150 mm of the bottom of the vertical strap.

RAINFALL DRAINAGE
uPVC guttering and downpipes to clients approval. Falls for guttering to be 1:600 and brackets fixed at max 2m ctrs. Downpipes to be connected into underground drains via reducing adapter. Underground drains to be 110mm Ø Osma uPVC or similar approved with flexible joints laid on 100mm pea gravel and min 150mm surrounds laid to 1:100 falls to new soakaway/soakaway specification detailed elsewhere.

ROOF FLASHING TO ABUTMENT WALL WITH MIN. 75mm UPSTAND
Provide Code 4 lead flashing to abutment wall with min. 75mm upstand.
TYPICAL ROOF TOP ABUTMENT DETAIL
Not to Scale
Lead support tray
Code 4 Lead flashing dressed over tray, engaged into channel and dressed up wall by min. 75mm and turned into brickwork.
50 x 25 S.W. batten 40mm down from wall
Tile
Rafter
Underlay
150 x 75 batten fixed to wall.
Note: The detail shown is a typical constructional method for mans pitch roof abutments. This detail should be adapted to suit specific site conditions and always to the satisfaction of the Building Inspector.

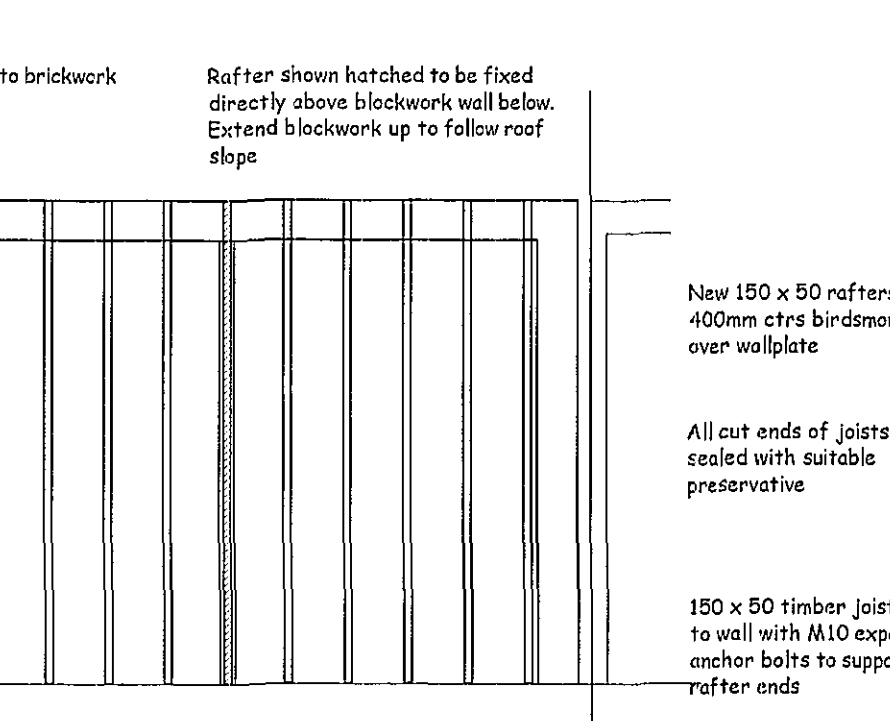


Note: The detail shown is a typical constructional method to provide an inner skin of blockwork. This detail should be adapted to suit specific site conditions and always to the satisfaction of the Building Inspector.

EXTERNAL WALLS
All external walls to be 275mm overall thickness comprising of:
-100mm Facing Brickwork to be advised
-75mm cavity filled with Crown DriTherm (or equal approved) built in as work progresses. Insulation batts should be kept clean and free from mortar droppings, all joints should be closely butted.
Any cutting and fitting should be neatly done and not distort the layers of glass wool which comprise the material. All D.P.C.'s should be installed to ensure that penetrating water is directed only to the outer leaf.
-100mm Thermalite Shield insulating blockwork.
Continuous wall insulation at least 150mm below top of perimeter floor insulation and support off wall ties.
External wall to achieve a min 'U' value of 0.35w/m²K.
CAVITIES
Close all cavity walls at Jamb with Thermabate or similar approved Insulated cavity closers fitted strictly in accordance with manufacturers instructions. Roof insulation to be continuous with wall cavity insulation. Install Insulated Cavity Closers by Thermabate or equal approved, 25mm thick x 75mm wide (to equal cavity width) at Jamb and cills of all openings in masonry cavity walls. Secure with the proprietary clips provided at maximum 500mm centres. Ensure that closers fit tightly to each other and to the lintel. The closer at the jamb must completely lap the closer at the cill.
WALL TIES
Stainless steel cavity wall ties to BS1243:1978. To be built into cavity wall as works proceeds and spaced at 750mm centres horizontally, 450mm centres vertically and 300mm staggered around all openings. Ensure wall ties are level or at least sloping to the outside leaf. Bed ties a minimum of 50mm into each leaf and ensure wall ties are completely free from mortar droppings.

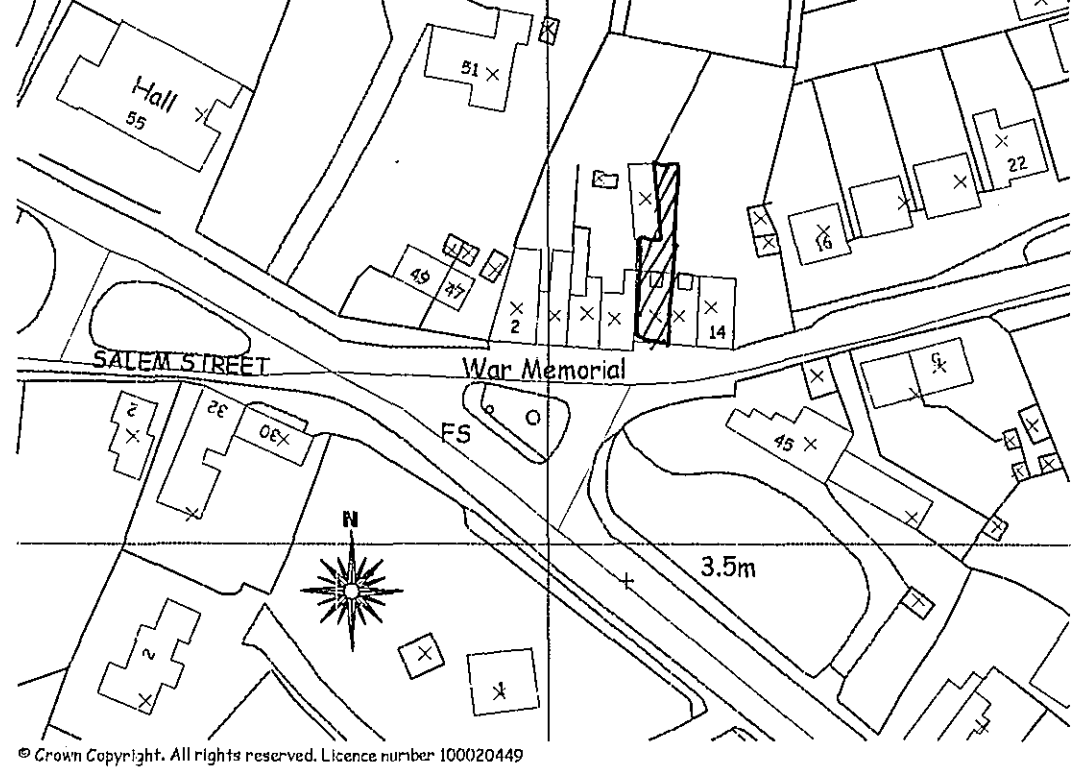
LINTELS
All lintels to cavity wall to be factory insulated Birtley Supergalv range unless noted otherwise or equal approved. All lintels must have a min. 150mm endearing and installed in accordance with manufacturer's instructions. Do not allow masonry to overhang lintel by more than 25mm. Note: lintels are not to have a continuous baseplate.
WINDOWS & DOORS
All windows to be Purpose made Timber Joinery to clients requirement based on styles shown on elevations. Fit with 4000mm² trickle ventilators to Kitchen, Utility Bathroom & En-Suite windows and 8000mm² elsewhere all in accordance with manufacturer's recommendations. Patio doors to be fitted with 10000mm² ventilators. Opening vents to give 1/20 th of floor area rapid ventilation to all rooms. All glazing within 800mm of floor level and within 300mm of a door to a height of 1500mm of ground level to have toughened glass in accordance with Section N of the Building Regulations and BS6206 class B. All double glazed units to be installed in accordance with BS 6262 and to have a 16mm Air gap with a soft Low 'E' coating on glass inner pane to achieve a min 'U' value of 2.0 w/m²K. Note all windows to have a perimeter weatherseal both internally and externally and to be fully draught sealed. Provide frosted glass to all Bathroom, W.C. and En-Suite windows. Ensure windows & doors are fitted within masonry reveal to overlap cavity closer by min. 40mm to avoid cold bridging.
TIMBER WALLPLATES
All timber wallplates supporting roof trusses to be 100mm x 50mm bedded on top of wall. Timber to be SC3 grade and use a min. length of 3m and half-lap plates at joints and corners. Provide anchor straps as described in notes elsewhere.

ROOF FINISH
Concrete Interlocking Double Pantile such as "Marley Mendip" or similar tile that will allow roof pitch as shown on section drawing (colour to match existing) fixed in accordance with manufacturers instructions and in accordance with BS 5934:Part 1 and 2 set out to give true lines and regular appearance, fitting neatly at all edges, junctions and features. Fix roof covering to make the building sound and watertight at the earliest opportunity. Repair any defects as quickly as practicable to minimise damage and nuisance & keep gutters and pipes free of debris and clean out at completion. Provide 50x25 preservative treated timber battens. Tiling battens should be not less than 1.2m long and continuous over at least 3 trusses. They should be fixed to every rafter member which they cross, or on which they are joined, with nails in accordance with BS5934: Part 1. The ends of the battens should be saw square and butt jointed centrally on a rafter member so that adequate bearing and nailing can be provided for each end of each batten. Butt joints in battens should be arranged so that not more than one batten in four is joined on any one rafter. Generally all tiles at perimeter of roof to be clipped and nailed. Use Code 4 Lead flashing to any abutments with min. 75mm upstand.



ALL TIMBER TO BE SC16 STRENGTH CLASS, DRY GRADED TO BS4978 AND MARKED "DRY" OR "KD"

PROPOSED ROOF PLAN
Not to Scale



Note: The detail shown is a typical constructional method to provide an inner skin of blockwork. This detail should be adapted to suit specific site conditions and always to the satisfaction of the Building Inspector.

SOAKAWAYS
All rainwater to discharge into soakaways and to be min of 5m from any building & a min of 1m² filled with rubble to within 450mm of external ground level. Overlay rubble with polythene sheet and backfill with clean topsoil. Note the soakaway inlet pipe must discharge to the centre of the soakaway in all directions.
CEILING
All ceilings to be 15mm plasterboard to BS1230.
Ceilings to be have Coving and skim finish to clients requirement. Plasterboard sheets to be fixed with joints staggered and must be lapped perpendicular to all joist runs. Fix boards at a min. 150mm centres.
ROOF / LOFT ACCESS
Provide insulated roof access trap door with a fully weathered sealed frame and a 35mm brass bolt or to clients requirements.

SITE PLAN
Scale 1:250
New 215mm thick x 1500mm high boundary brick wall to extend to edge of existing garage with timber class boarded gate for access.

PLEASE NOTE:
Due to areas of the structure being covered, unexposed or otherwise inaccessible the notes / specifications of existing materials are subject to confirmation of site when it is feasible to expose the relevant areas of construction.
GENERAL CONDITIONS
Contractors are responsible for checking all dimensions on site when work commences and before ordering any materials. Any discrepancies should be brought to the attention of the Client for remedial action before commencing further.
All details shown are based on typical site conditions for the work proposed and all necessary BS codes for Workmanship on Building Sites.
No allowance has been made for any Structural Calculations, a SAP calculation, Soil Investigation or Flood Risk Assessment. If deemed necessary then these will be a chargeable extra. All steel beam sizes shown on drawings are all subject to confirmation from Structural Engineer.
All materials not specified to be of a standard suitable for the work proposed and to be fit for purpose. All work to be in accordance with good building practice and all necessary BS codes for Workmanship on Building Sites.

Client: Mr D Towell
10 Mill Lane
Gosberton
PE11 4NN

SHDC
Planning & Development
2 8 APR 2005
Ref: 056405

Site: Replacement Rear Extension

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Spalding
Lincs
PE11 3HX
Tel: 01815 112 058
Fax: 01775 768 921
Email: jason@remwaydesign.co.uk

DETERMINED
PLAN

Date: april05 Scale: 1:50 / 1:100

Drawing No: rem 989-01