Roof construction:

New section of pitched roof constructed of interlocking concrete tiles to match existing installed to manufacturers recommendations on 25x50 sawn treated battens on sarking felt on built up timber roof structure formed of:

- 38x100 rafters at 400mm ctrs.
- 47x125 ceiling joists at 400mm ctrs.
- 100x225 purlins.
- 50x200 ceiling beams.
- 38x150 ridge.
- 100x100 wall plates.

New section of pitched roof to front of garage formed of tiles, battens and sarking as above on roof structure formed of 38x100 rafters and ceiling joists at 400mm ctrs with 100x100 wall plate.

Main roof pitch to match existing (approx 22½°). Roof to garage front to match adjacent roof over, ridge which is to be extended up to garage side wall with code 4 lead flashing (i.e roof pitch and tile type to match roof over entrance)

All structural timber to be grade SC3 and marked dry or kiln dry.

New dormer roof to match existing with finish of mineral finish high performance polyester based 3 layer built up roof finish on min. 18mm thick exterior grade plywood decking on timbers to fall 1 in 60 on min. 50x100 joists at 400 ctrs. Provide 150mm deep cavity between to min. 150mm depth of combined insulation plus ventilation gap. Joists supported on joist hangers on box lintel and external wall gap.

Eaves constructed to match existing including dormer and to incorporate roof void vent strips to give 25000mm² vent per metre with 5000 mm² per metre vent installed at ridge. Maintain min. 50mm vent gap above insulation throughout.

Flat roof finish taken up below roof tiles and sarking on min. 12mm thick exterior grade plywood decking installed on top of rafters. Tiles to lap flat roof finish by min. 300mm.

Roof insulation:

Main roof insulated with 100mm fibreglass quilt laid between ceiling joists with layer of 150mm thick quilt laid over joists.

Dormer flat roof insulated with 100mm fibreglass quilt between joists with 50mm vent gap over and ceiling below formed of 20mm thick gyproc thermal board on 50x100 box lintel.

Code 4 lead flashing with cavity tray dpc (each side of window) at junction of pitched roof and wall.

Install 90x5mm mild steel straps between roof structure and wall (at ceiling level and at eaves and roof) and between suspended floor and walls at average 1200 ctrs. straps to extend over 3no. timbers where at right angles supported by noggings.

New uPVC gutters and downpipes to match existing and to connect to existing stormwater drainage.

Ceilings:

New first floor ceiling formed of 9.5mm plasterboard with 'Artex' finish. Retain existing ceiling above utility and former lobby etc and make good where walls removed.

Install new 12.5mm thick gyproc fireline board ceiling to garage fixed to existing retained flat roof joists. Install 200mm thick fibreglass quilt insulation above garage ceiling below first floor.

Suspended floor:

Constructed of 18mm thick T&G flooring grade chipboard on 50x122 joists at 400mm ctrs. Install double joists spiked together below stud partition.

Cavity wall:

102mm thick facing brick, 75mm cavity and 100mm thick thermalite standard blocks with internal finish of 9.5mm thick plasterboard and skim on dabs.

Install 75mm thick Dritherm cavity insulation batts to manufacturers recommendations average U value = 0.45W/m²K.

Install flashings insulated dpc to reveals with frames lapping by min. 150mm

Install wall ties at 900mm ctrs. horizontally and 450mm ctrs. vertically staggered with ties at 225mm ctrs within 225mm of reveals.

Fully fill cavities.

Fully bond new walls to existing.

Install cavity tray dpc above existing retained ground floor lintels.

Lintels:

Install 1 no type LV/75 steel lintels to 2 no. new window openings. Install 1 no box lintel 100 steel lintels to door opening and 1800 wide opening (extended bedroom).

Install 1 no box lintel 100 below wall plate over extended bedroom. (check and provide support if available)

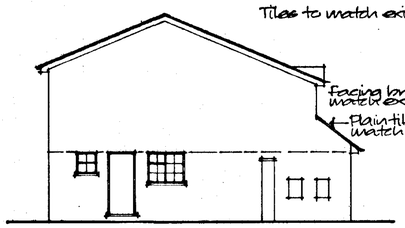
Install 1 no type LV/HD/75 lintel below cavity wall over garage.

Install 1 no type LV/HD/75 lintel between piers to side of garage installed above ceiling level.

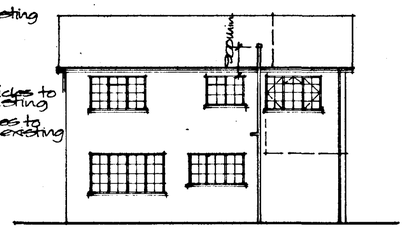
Install 2 no 1 no box lintels to enlarged opening. (box lintel 100)



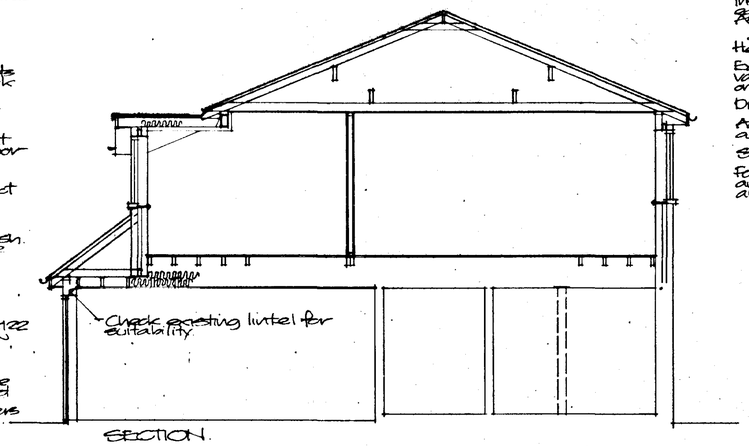
FRONT ELEVATION



SIDE ELEVATION



REAR ELEVATION



SECTION.

Foundations:

Existing retained foundations to be checked for suitability. See separate note regarding pad foundations to side wall of garage.

Windows:

Install 2 no. new uPVC framed windows with sealed unit double glazing (min 2.0 W/m²K) to glass within 800mm of floor.
Opening lights to be casement fastened.
Opening lights to be suitable for fire escape.
Install trickle vents to provide 8000mm² background ventilation to each bedroom.
Approx. window sizes: Front bedroom 1 800x1 800
Rear bedroom 1 200x1 800

Heating:

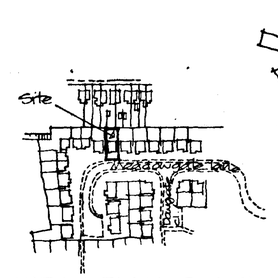
Extend existing central heating system into proposal with thermostatic valves fitted to new radiators. Hot water pipes insulated with Armaflex or similar of thickness to match pipe outside diameter.

Drains above ground:

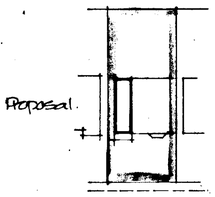
Assess existing waste drainage from bathroom to connect to existing altered soil and vent stack.

Stud partition:

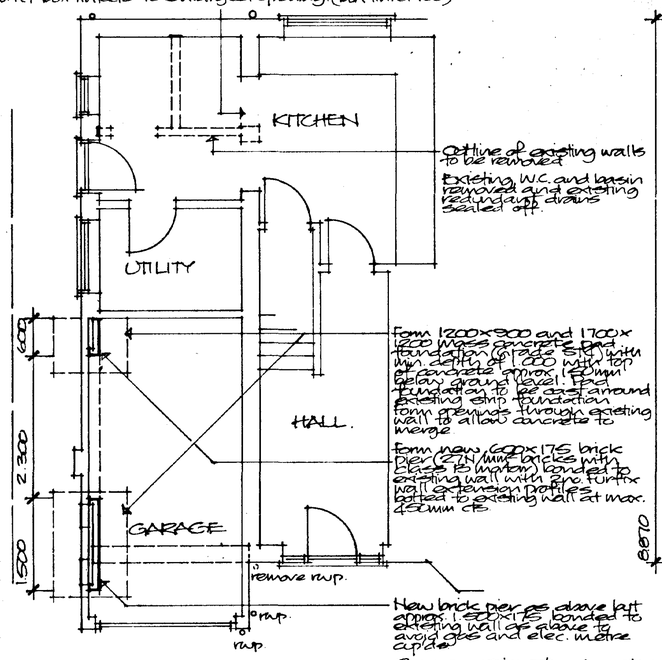
Formed of 50x75 studs at 400mm ctrs with 50x75 sole and head plates and noggings at 1 200 ctrs. clad both sides with 12.5mm plasterboard and skim and with fibreglass quilt packing between studs.



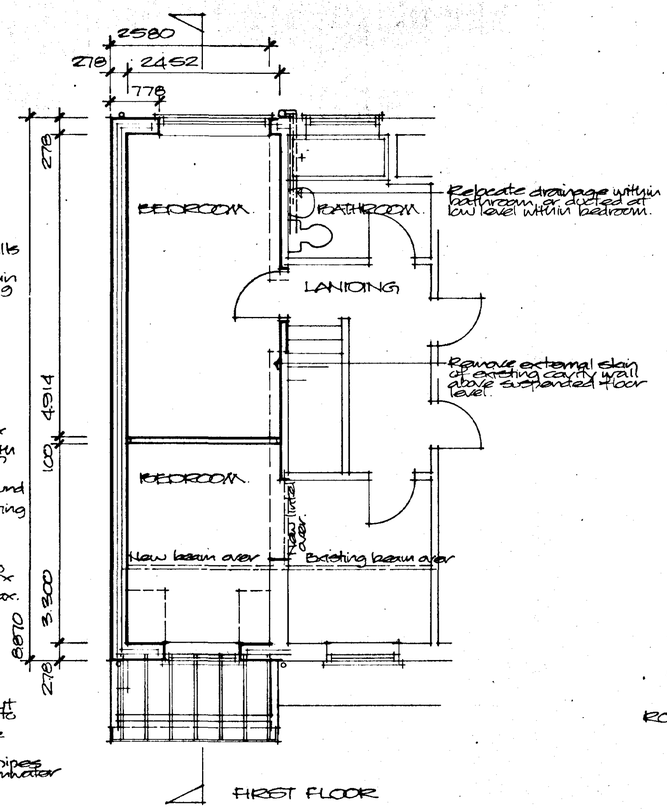
LOCATION PLAN Scale 1:2500



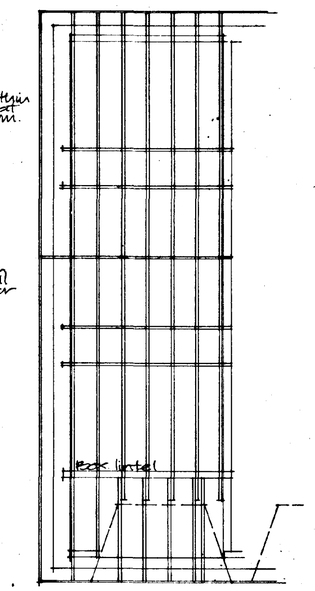
BLOCK PLAN Scale 1:500



GROUND FLOOR



FIRST FLOOR



ROOF STRUCTURE LAYOUT.

SHDC
Planning & Development
24 APR 2002
Ref 04/80/DA

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Project
PROPOSED EXTENSION TO HOUSE
58 MEADOWGATE LANE, SPALDING.

Client
MR. & MRS PETERS

Scale 1:50/1:100 Date April 02