Roof construction:

New section of pitched roof constructed of interlocking concrete tiles to match existing installed to manufacturers instructions on 25x38 mm treated battens on sarking felt on built up roof structure formed of:

- 47x100 rafters at 400mm cts
- 38x100 ceiling joists at 400mm cts
- 50x200 ceiling ties at every 3rd joist
- 75x225 purlins at centre of rafter span
- 47x150 hip rafters
- 38x150 ridge
- 50x100 wall plates

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

Retain small area of existing pitched roof over front of garage with tops of rafters built into new wall and existing ceilings retained to garage, playroom and cloaks with existing joists supported from new floor joists (above garage) and existing roof joists retained.
Suitability of existing ceilings to be confirmed.

Install gate & lead flashing combined with cavity tray d.p.c. at junction of existing garage roof and new cavity wall.

Eaves construction to match existing and to incorporate roof void ventilation strip to provide at least 10,000mm² ventilation per metre.
Maintain min 50mm vent gap above roof insulation at eaves.
First floor ceiling height to be determined by eaves construction (reduced roof pitch).

New uPVC gutters and downpipes to match existing and to be powdercoated to match existing and downpipe which is to be connected to existing underground storm water drainage with 100mm dia. uPVC drains backfilled on 100mm pea gravel to fall at approx. 1 in 40.

50x6mm mild steel straps to be installed between new roof structure and walls and between new floor joists and perimeter walls at average 1,200 cts.
Straps to be installed at ceiling level and at top of roof straps to extend over 2no timbers where at right angles with solid noggings under (roof and floor).

Roof insulation:

Install 2 layers of 100mm thick fibreglass quilt insulation with 1 layer between and 1 layer over ceiling joists.
Note: Install 1 layer of 100mm thick fibreglass quilt insulation above garage ceiling below new floor.

Ceilings:

New first floor ceilings formed of 9.5mm thick plasterboard fixed at perimeter and intersect with joists.
Existing ceiling joists to be min 12.5mm fireline board or other suitable material to provide 30minute fire protection the ceiling is to have an additional layer of 12.5mm plasterboard added below existing.

If remaining ceiling below extension not 12.5mm thick plasterboard additional protection may be required to be agreed on site). Retain existing insulation above these ceilings.

Suspended floor:

To be formed of 18mm thick moisture resistant flooring grade T and G chipboard on 38x147 joists at 400mm cts.
Clear span less than 2.5m.

Foundations:

The existing foundations are to be exposed where required to confirm suitability to support extension.

Windows:

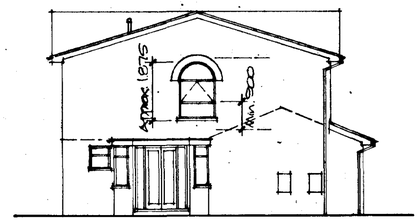
Re-use existing landing window to front of bathroom (uPVC)
Install 1200mm x 1,050 deep uPVC window frame with obscured glass to new en-suite and new curved head uPVC window frame to side of new bedroom 2,200 wide x approx 1,675 high (2 windows to be combined) to provide at least 1/20 in floor area as ventilation (opening lights).
Install trickle vents to new bedroom to provide 8,000mm² background ventilation and 4,000mm² vents to each suite.
All windows to be double glazed and to have safety glass to BS 6206 where within 800mm of floor level.
Opening lights to be draught sealed.

Interlocking concrete tiles to match existing

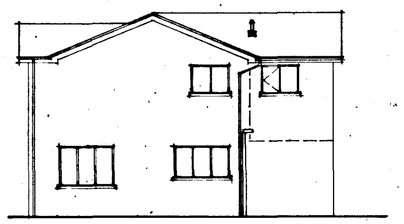
Facing brickwork to match existing



FRONT ELEVATION

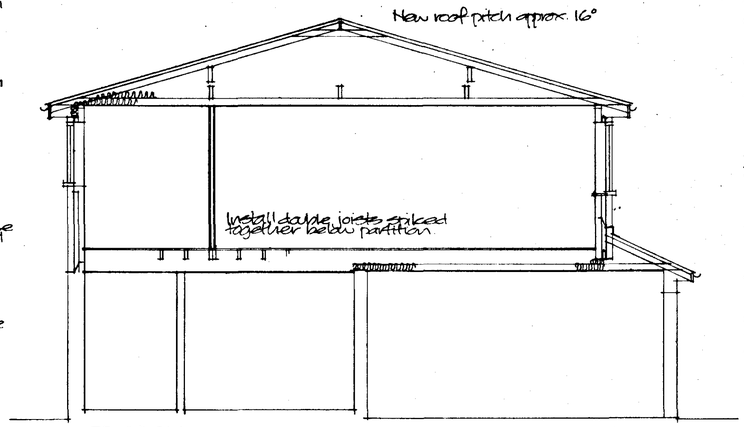


SIDE ELEVATION



REAR ELEVATION

New roof pitch approx. 16°



SECTION

Heating:

Existing central heating system extended with thermostatic valves fitted to new radiators.
Water services extended to new en-suite.
All hot water pipes insulated with Armaflex or similar of thickness to match pipe outside diameter.

Cavity walls:

Constructed of 102mm facing brickwork, 65mm cavity and 100mm thick white standard block or similar with internal finish of dense plaster.
Walls to be insulated with 65mm thick fibreglass cavity batts installed to manufacturers recommendations.
Average U value = 0.42 W/m²K
Provide insulated d.p.c. to reveals with frames lapping by min. 15mm.
Wall ties to be installed at 900mm cts horizontally, 450mm cts vertically and at 225mm cts within 225mm of reveals.
Tops of cavities sealed with 6mm Supalux or similar.

Facing brickwork to front elevation to be fully bonded to existing, the remainder to be bonded using Furfix wall extension profiles.

Lintels:

Install I.G. type L1/550 steel lintels to suit new first floor external openings. Lintel to carry head of gable window to be installed 150mm above finished brickwork and to have cavity tray stepped as lintel not less than 150 long.
Install box lintel 100 above internal door opening into bathroom.
Install 2no type L1/HD50 steel lintel under bedroom front wall above garage.
Install cavity tray d.p.c. above retained ground floor lintels.

Stud partitions:

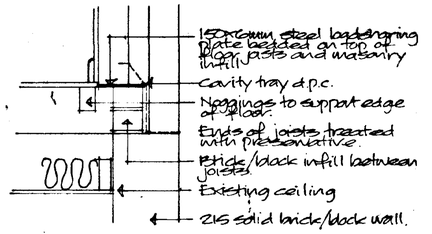
Formed of 50x75 s.w. studs at 400mm cts with 50x75 sole and head plates and noggings at 1,200 cts.
Existing to both sides to be 12.5mm plasterboard with skim finish. Install mineral wool packing between studs.

Mechanical ventilation:

Install extract fan to en-suite to extract at a rate of 15 litres per second.

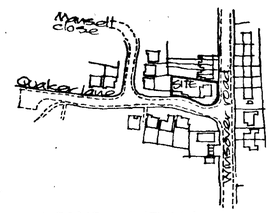
Drainage:

40mm dia. polypropylene waste to shower and 32mm dia. to wash basin with 50mm dia. combined waste.
Install 75mm deep seal trap to wash basin and 50mm deep seal trap to shower tray.
All fittings including W.C. to be connected to existing 110mm dia. horizontal uPVC drain running to existing soil stack.
Provide new 110mm dia. ventilated soil & vent stack, main drain run and vent stack.
Provide new pipe to terminate above new roof finish.
Install new drain point at existing horizontal drain run at base of vent stack.

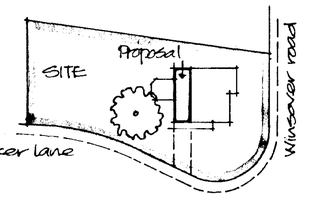


DETAIL 'B'

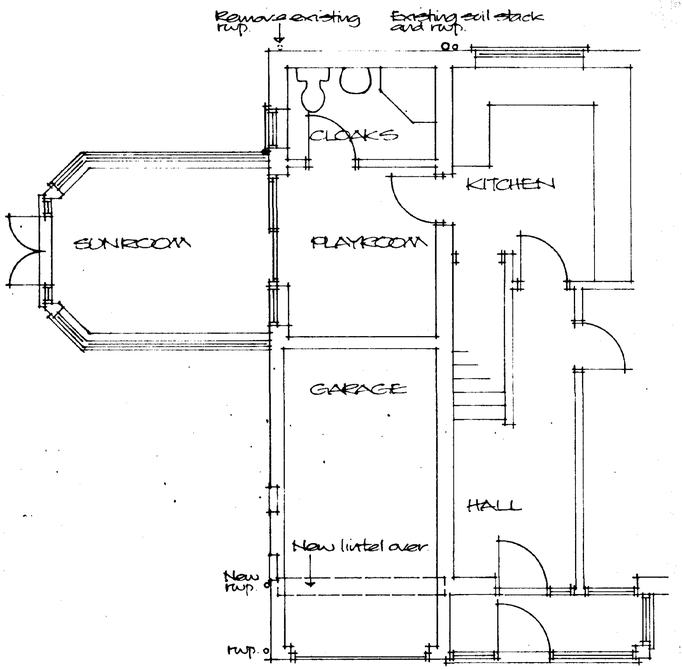
North.



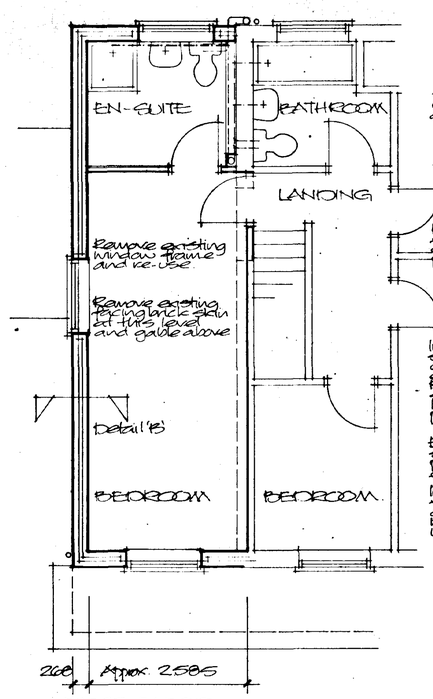
LOCATION PLAN
Scale 1:2500



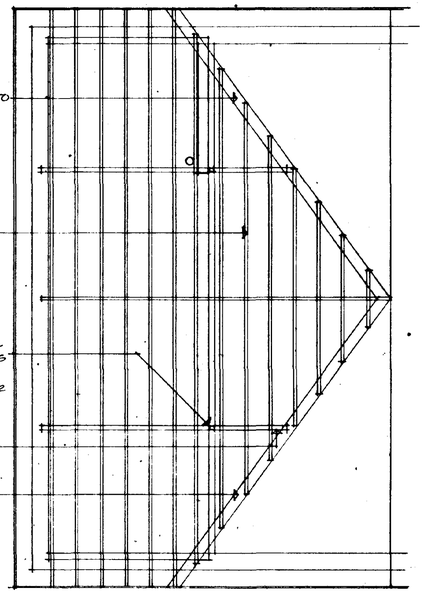
BLOCK PLAN
Scale 1:500



GROUND FLOOR



FIRST FLOOR



ROOF STRUCTURE LAYOUT

DETERMINED PLAN
SOUTH HOLLAND DC
HOUSING & PLANNING
-3 OCT 2000
Ref: 12/0/00

BROADGATE BUILDERS LTD
The Race Ground
Spalding
Lincolnshire
PE11 3AP
Telephone: 01775 725616
Fax: 01775 725097

Project
PROPOSED EXTENSION TO EXISTING HOUSE: 2 QUAKERS LANE, SPALDING.

Client
MR & MRS C. DUNMORE

Scale 1:50/1:100 Date Sept 2000