Roof structure:
New section of pitched roof constructed of interlocking concrete tiles to match existing installed to manufacturers recommendations on 25x38 fully battened battens on sarking felt on built up roof constructed of:
- 50x100 rafters at max. 450mm ctrs (except where otherwise stated)
- 50x150 ridge beam
- 100x100 posts installed where stated
- 75x100 collars at 1/3 rdge
- 50x150 ceiling joists at max. 450mm ctrs
- 50x150 purlins
- 50x200 hip rafters
- 50x100 valley rafters
- 50x150 joists (double) where indicated below props. (bolted together)

Roof pitch to match existing (approx. 32½°)
All structural timber to be grade SC3 and marked dry or kiln dry.
Short ceiling joists to front and rear combined with 30x5mm M.S. straps extending over 3no. main ceiling joists.

Eaves construction:
New eaves to match existing including projection and to incorporate roof void ventilation strip to give min. 10,000 mm² ventilation per metre.

Roof insulation:
Install 1 layer of 100mm thick fibreglass quilt insulation between ceiling joists and 1 layer of 150mm thick quilt insulation over joists. Maintain roof void ventilation at eaves.

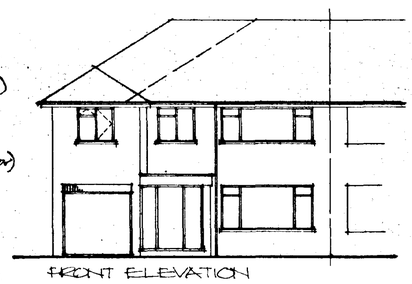
Ceilings:
New first floor ceilings formed of 9.5mm thick plasterboard with 'Artex' finish and perimeter supported. Retain existing ceiling and joists above breakfast area. New garage ceiling formed of 12.5mm thick Gyproc Fireline board with 'Artex' finish and perimeter support.

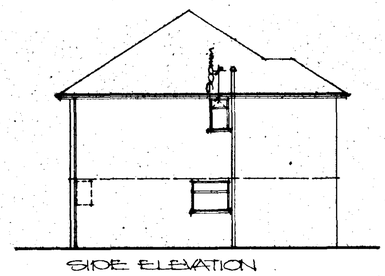
Suspended floor:
Formed of 18mm thick T & G moisture resistant flooring grade chipboard on 22x97 joists at 400mm ctrs packed out to 200mm deep over existing wall. Install 22x200 joists bolted together below stud partitions. Install solid or herringbone strutting to floor joists at mid span.
Install 200mm thick fibreglass quilt insulation between joists over garage.
New joists supported on internal walls and on joist hangers on external walls.
Check suitability of existing lintels below floor joist support locations. (lintel over kitchen/breakfast)

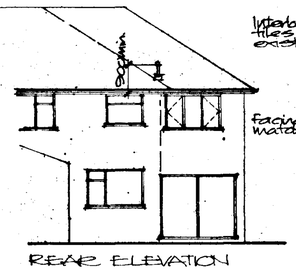
Gutters and downpipes:
New upvc gutters and extended downpipe to match existing.

Cavity wall:
New cavity walls constructed of 105mm facing bricks, 75mm cavity and 100mm thermalite standard blockwork with internal finish of 9.5mm thick plasterboard and skim on dabs.
Cavity insulation to be 75mm thick Dritherm beads installed to manufacturers recommendations.
Average U value = 0.35 W/m²K.
Damp proof installed d.p.c. to reveals with frames lapping by min. 15mm.
Seal tops of cavities.
Install cavity wall ties at 900mm ctrs horizontally, 450mm ctrs vertically and at 225mm ctrs within 225mm of reveals.
Walls to be bonded to existing with Furfix wall extension profiles except face brickwork on rear elevation which is to be fully bonded to existing.

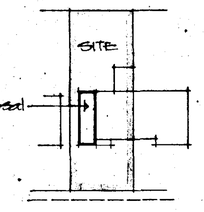
Lintels:
Install I.G. type LI/S75 steel lintels above new first floor window openings.
Install I.G. type LI/HD75 steel lintels above garage door patio doors and opening between piers to side of garage. Provide fire protection to garage door lintel.
Install I.G. box lintel 100 steel lintel below existing wall plate over front bedroom and above door opening to rear bedroom.
Install cavity tray d.p.c above new ground floor lintels.
Lintels above side of garage installed above garage ceiling level with Fireline board installed below lintels.


FRONT ELEVATION

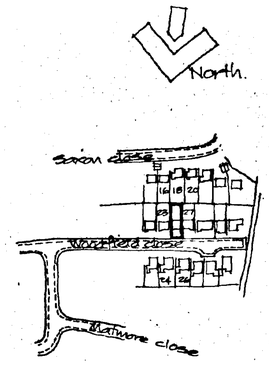

SIDE ELEVATION



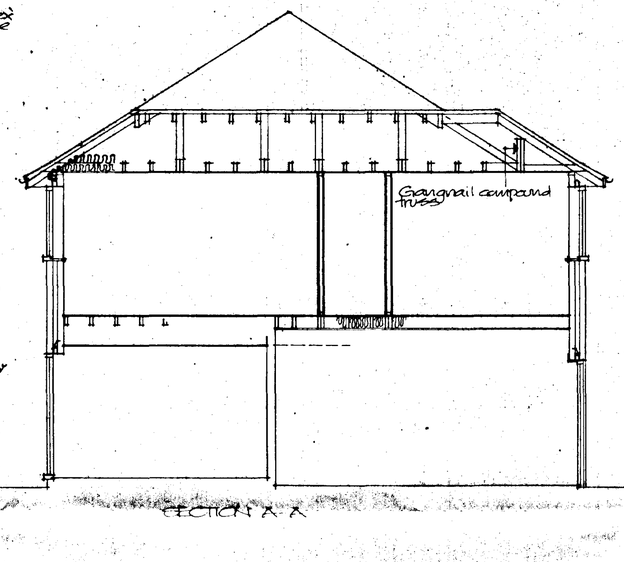
REAR ELEVATION



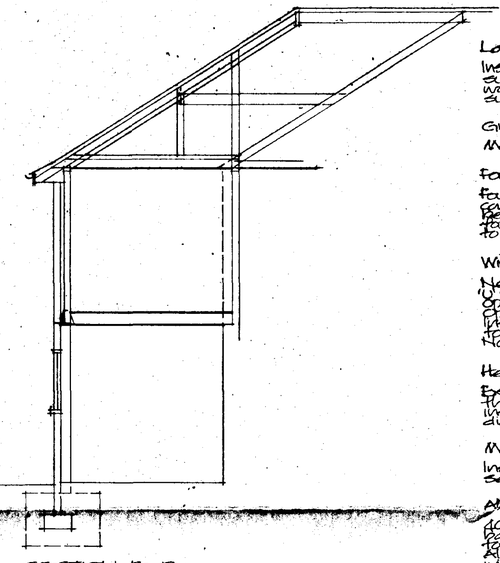
BLOCK PLAN
Scale 1:500



LOCATION PLAN
Scale 1:2500



SECTION A-A


SECTION B-B

Lateral restraint:
Install 30x5mm mild steel straps installed at average 1.800cts between suspended floor joists and walls and between roof structure and walls. Straps to extend over 3no. timbers where at right angles supported by noggings.

Ground floor:
Make good existing garage floor where new foundations installed.

Foundations:
Foundations to new piers in garage to be formed of grade ST4 concrete with min. depth of 1,000 with top at concrete approx. 150mm below ground level. Foundations to be cast around existing foundations with openings formed through walls to allow concrete to merge together.

Windows:
New UPVC framed windows to be glazed with sealed units of minimum 'U' value of 2.2 W/m²K
Opening lights to be draught sealed.
Openings to bedroom windows to provide min. 9,000mm² background ventilation to bedrooms and 4,000mm² to en-suite.
No glass within 800mm of floor.

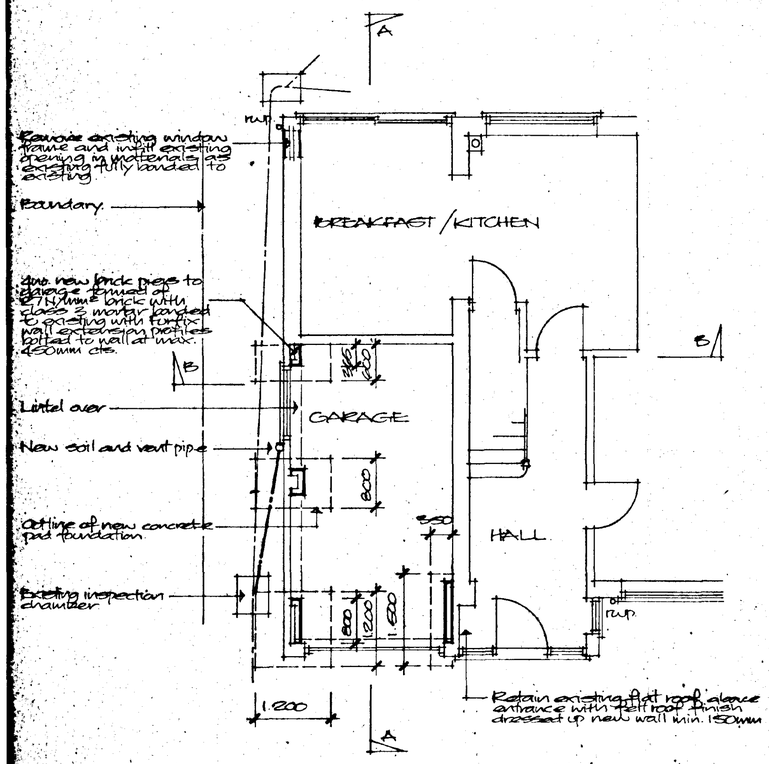
Heating/hot water:
Extend existing heating and water services into proposal. Install thermostatic valves to new radiators. New hot water pipes to be insulated with Armaflex of thickness to match pipe outside diameter.

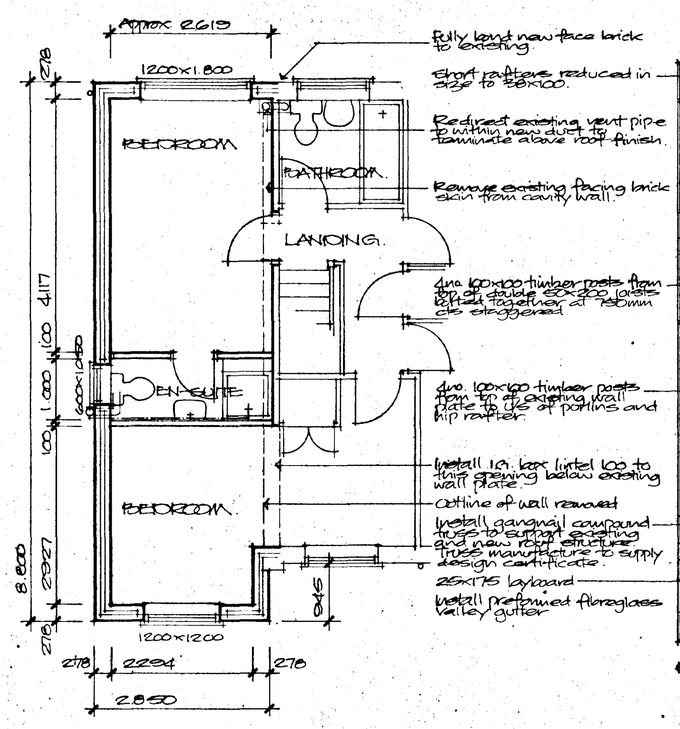
Mechanical vents:
Install extract fan to en-suite to extract at a rate of 15 litres per second.

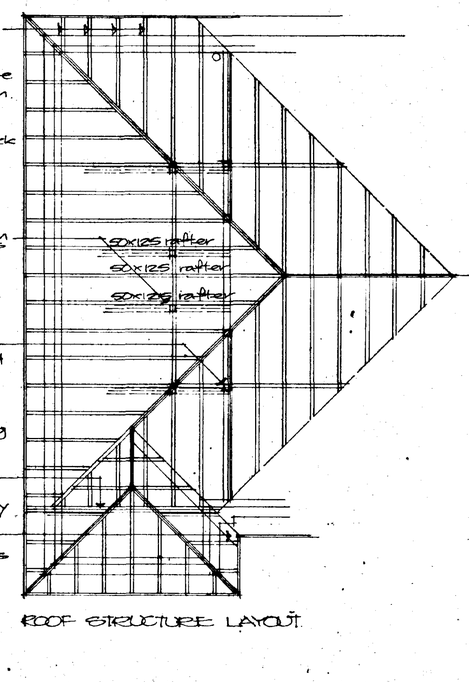
Above ground drainage:
40mm dia. Polypropylene waste from drainer with 32mm dia. 40mm wash basin with 32mm dia. combined waste. Install 75mm deep seal trap to wash basin and 50mm deep clearable trap to shower tray. All fittings connected to new 110mm dia UPVC soil and vent stack with rodding point at base.

Below ground drainage:
New 110mm dia. UPVC drain bedded and surrounded in 100mm Pea gravel to depth at 1 in 60 to connect to existing inspection chamber. Drain to be protected by concrete paving.

Stud partition:
50x75 studs set 400mm ctrs with 50x75 sole and head plates and noggings at 1,200 ctrs. Cladding to both sides to be 12.5mm plasterboard and skim with fibreglass quilt packing between studs.







ROOF STRUCTURE LAYOUT

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Project
PROPOSED EXTENSION TO HOUSE 25 WOODFIELD CLOSE, BRALDING.

Client
MR. & MRS R AVERY

Scale 1:50/1:100 Date May 02

DETERMINED PLAN

SHDC Planning & Development - 7 JUN 2002

Ref 06SH02