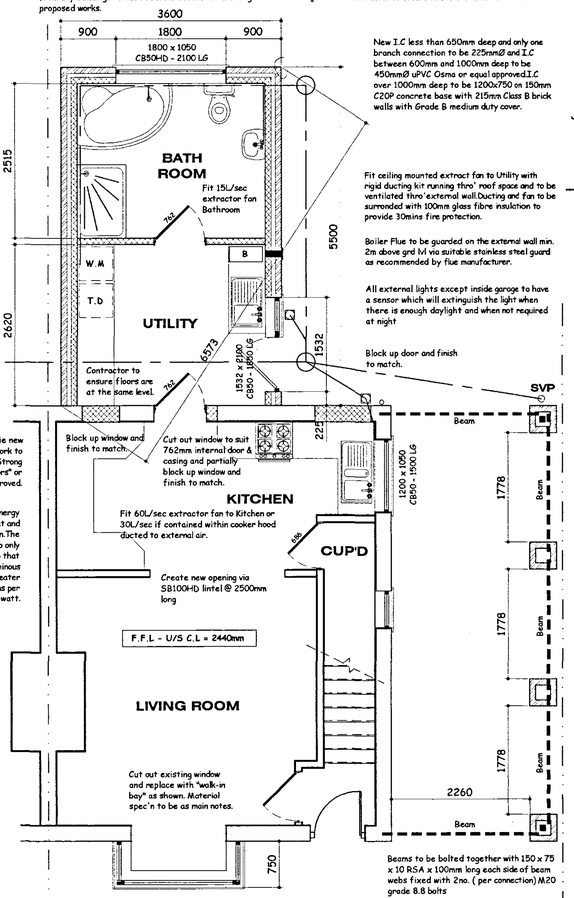
Contractor to check all Dimensions on site prior to ordering materials / commencing work.Do Not Scale from this Drawing - If in doubt then please ask

Underground drains to be as rainwater drainage but with min.1:80 and max.1:40 falls.Fall of drains from gullies to be 1:40.All drains passing thro' walls to have concrete lintel over with 50mm space around filled with compressible material and opening masked with durable rigid sheet to prevent ingress of vermin or back fill.Drain runs must not be any lower than foundation depth unless min.of 1m from any building.Provide roddable access to all change in bends and junctions.Contractor to ensure no live drains run beneath proposed works.



PROPOSED GROUND FLOOR PLAN

New I.C less than 650mm deep and only one branch connection to be 225mmØ and I.C between 600mm and 1000mm deep to be 450mmØ 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.

Fit ceiling mounted extract fan to Utility with rigid ducting kit running thro' roof space and to be ventilated thro' external wall.Ducting and fan to be surronded with 100mm glass fibre insulation to provide 30mins fire protection.

Boiler Flue to be guarded on the external wall min. 2m above grd lvl via suitable stainless steel guard as recommended by flue manufacturer.

All external lights except inside garage to have a sensor which will extinguish the light when there is enough daylight and when not required at night

Block up door and finish to match.

Vertical posts to be 100 x 100 x 4 SHS with 150 x 10 flat x 250 long cap plate fixed to beams with 4no. M16 grade 8.8 bolts @ 90mm ctrs. Base plate to be 250 x 250 x 10mm thk fixed to slab with 4no. M16 resin anchors @ 170mm ctrs.Concrete backfill is to be provided over the whole base area to a min. thickness of 100mm. Posts to be supported on 1250 x 1250 x 300mm RC35 reinforced concrete pad with 5no. 16mm Ø longitudinal & transverse bars at 270mm centres

Provide 152 x 152 x 23 UC beams with 250 x 10 plate continuously welded to top to support cavity wall with 250 x 100 x 10 bearing plates either ends bearing onto 3no. courses on engineering brickwork.

Fix externally to u/side 12mm thk exterior grade WBP plywood sheeting ensuring to allow expansion gaps of 3mm at joints.Fix breather membrane to outer face of sheeting.External finish to uPVC T&G cladding with all necessary fixings and corner covers.Solid pack internally with mineral fibre insulation and flooring a 500 gauge vapour barrier.

Solid fill floor zone with insulation to achieve 0.25W/m²K and 30mins fire resistance

450 x 450 Brickwork pillars built off pad foundation



PROPOSED SIDE ELEVATION

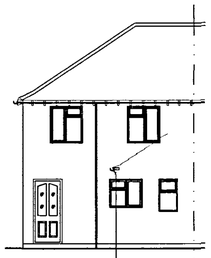


Canopy to be constructed from 100 x 50 timber rafters & ceiling binders. Remainder to be as main roof spec'n with Code 4 lead flashing to abutment wall.

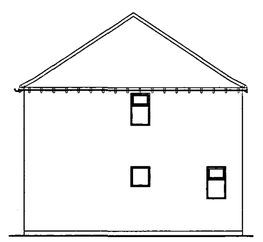
PROPOSED FRONT ELEVATION



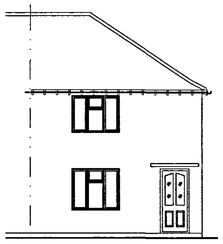
PROPOSED REAR ELEVATION



EXISTING REAR ELEVATION



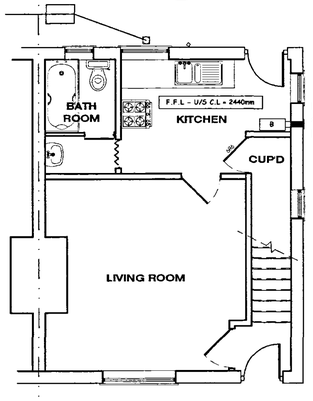
EXISTING SIDE ELEVATION



EXISTING FRONT ELEVATION

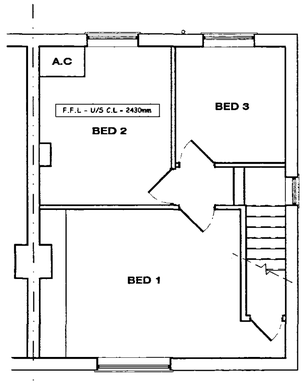
Check intergrity of existing drains and replace if necessary.

Existing well to be completely filled with lean mix concrete with 200mm reinforced concrete slab over top.



Relocate boiler as shown on proposed plan

EXISTING GROUND FLOOR PLAN



EXISTING FIRST FLOOR PLAN

CEILINGS
All ceilings to be 15mm plasterboard to BS1230. Ceilings to be have Coving and skim / artex finish to clients requirements.Plasterboard sheets to be fixed with joints staggered and must be layed perpendicular to all joist runs.Fix boards at a min.150mm centres.

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 ø Multikwik or similar approved W.H.B=32mm ø uPVC with 75mm Deep sealed trap SINK=40mm ø uPVC with 75mm Deep sealed trap SHOWER=40mm ø 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.

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.

INTERNAL JOINERY ,SKIRTING & ARCHITRAVES
All internal finished timber to be free from all defects and to clients approval prior to ordering any materials.

ELECTRICAL INSTALLATION
To be in strict accordance with the latest I.E.E Regulations and Engineer 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.

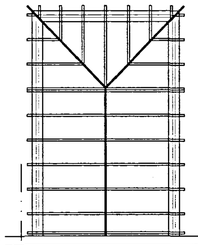
Flat top trusses to be supplied with extended rafters for site cutting by others to suit Hip Rafter.Note:The horizontal top chords to the flat top trusses are to be well braced together to resist lateral buckling.

Compound Girder of flat top trusses permanently fixed together

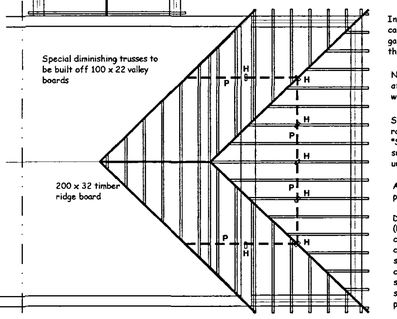
NOGGINGS
Fix 38x38mm timber noggings to all potential loose plasterboard ceiling edges and light fittings.Position of light fittings to be advised by client on site.

ROOF / LOFT ACCESS
Provide insulated roof access trap door with a fully weathered sealed frame and a 38mm brass bolt or to clients requirements.

Note:Provide 50x50 timber noggings for partition head fixing and pendant light fixings. Position of light fixings to be agreed on site with client.



Special diminishing trusses to be built off 100 x 22 valley boards



ALL TIMBER TO BE SC3 GRADE,DRY GRADED TO BS4978 AND MARKED "DRY" or "KD"

225 x 75 timber hip rafters

PROPOSED ROOF PLAN
Not to Scale

NOTE:MANUFACTURER'S DETAILS & CALCULATIONS TO BE FORWARDED TO SHDC'S BUILDING CONTROL OFFICER FOR APPROVAL AT LEAST 21 DAYS PRIOR TO FIXING ON SITE

Hip Rafters to be birdsmouthed over Pre Fabricated Compound Girder of Flat Top trusses and wallplate

30x5 m/s straps (S) over 2no. trusses at max 2m ctrs to gable ends and ceiling level. At least 1no.gable strap to be within 500mm of ridge.Provide solid noggings under each strap.

Infill Jack Rafters to be min.25mm deeper than Trussed Rafters to allow for birdsmouthing at wallplate

Pre - Fabricated Mono pitch trusses by specialist to be fitted to girder truss with approved Girder Truss Shoe with min. bearing length of 90mm.

All 25X100 diagonal and longitudinal wind bracing, and ceiling tie bracing to be free from all major defects and any weak points and fixed all in accordance with manufacturers details.Lap joints (if required) to be taken over 2no.trusses all in accordance with BS5268 Part 3 - 1985.Bracing to be fixed with 2no. 3.35 x 65mm galvanised round wire nails at each cross over and to firmly butt against walls.

Trussed Rafters to main roof to be at max.600mm ctrs.Roof construction to be designed strictly in accordance with BS5268 Part 3 1985 and to specialist manufacturers design drawings.Calculations to be submitted to the L.A building inspectors approval prior to any materials being placed on order.

In order to minimise movement of the wallplate caused by the hip rafter, fix a 1200mm long galvanised steel angle restraint strap around the outside of the wallplate.

New 150 x 50 rafters @ 400mm ctrs double-up at positions shown and birdsmouthed over wallplate

Support purlin connections directly over a rafter / strut or connection to be made with a "Scarf" joint near strut so that the joint supports the longer span.Provide metal plate under scarf joint.

All cut ends of joists to be sealed with suitable preservative

Dotted line shows 225 x 75 continuous purlin (P)birdsmouthed to 150 x 50 rafters at 450mm ctrs and built into gable wall with 175 x 38 collar & 100 x 50 vertical hangers at positions shown (H) in positions shown.Supply 150 x 50 ceiling joists / collars @ 100mm ctrs with strutting / lateral straps as floor joists specification and double up at vertical hanger positions and 200 x 50 ceiling binders

FOUNDATIONS
Existing building area to be stripped of all vegetable matter and rubbish to a min.depth of 150mm before excavation commences.Concrete mix for foundations to be GEN3 in accordance with BS5328:1981.Foundations to external wall to be min.700mm wide x 225mm deep.Excavate down to solid firm strata i.e 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
1no.Course of Class B brickwork & 2no. courses of Red Engineering brickwork below D.P.C on outer face and 1no.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 DPC 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 DPC 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 DPCs 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 as 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 skirtings. 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 contiguous with the DPCs. Vapour control layer (e.g. 1000 g polythene) laid directly over insulation.

DAMP PROOF COURSE (D.P.C)
Horizontal heavy duty polythene DPC "Hyload" or similar approved to all walls in accordance with BS 6515 and set min.150mm above all external ground levels.DPC 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.

EXTERNAL WALLS
All external walls to be 275mm overall thickness comprising of:
-100mm Brickwork to match existing
-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 DPC's should be installed to ensure that penetrating water is directed only to the outer leaf.
-100mm Thermalite Shield insulating blockwork. Continue 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 jambs 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 jambs 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 equalled approved.All lintels must have a min.150mm endbearing 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.

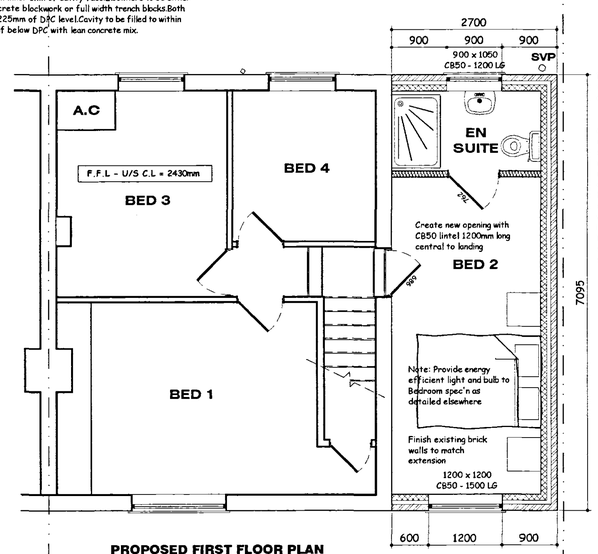
ROOF VENTILATION
Install Tyvek® or similar approved Breathable Membrane in accordance with manufacturers instructions which are briefly described below & BBA certificate 99/3635 (fourth issue) breather membranes in non-ventilated pitched roofs of any plan, any shape or any size under all types of roof 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 as 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. Stop the membrane short of the fascia and lap it onto the Eaves Carrier.Pack closed eaves with fibrous insulation to reduce thermal bridging.
Verge detail:
Lap the Tyvek® underlay 50mm onto the gable or flying rafter.
Ridge/ hip detail:
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.

ROOF INSULATION
The whole area of the ceiling to be insulated with two layers of Crown Wool Mineral Fibre Insulation or equal approved of a total thickness 300mm to achieve a 'U' value of 0.16w/m²K. Width of first layer of insulation to be appropriate to the joist spacings and of a thickness equal to joist depth (100mm). The insulation to be laid between the joists to finish over the wall plate on external walls and pushed up tight to roofing membrane. The second layer (200mm) of Crown Wool to be laid at right angles to the first layer. All joints between the rolls of insulation to be

RAINWATER DRAINAGE
White 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 peagravel and min 150mm surrounds laid to 1:100 falls to new soakaway.Soakaway specification detailed elsewhere.

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 central heating and hot water pipework in unheated areas may require increased insulation thicknesses for the purpose of protection against frost, refer to BRE Report No. 262 2002 Edition.

WINDOWS & DOORS
All windows to be White uPVC to clients requirements 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 & En-suite windows.Ensure windows & doors are fitted within masonry reveal to overlap cavity closer by min.10mm to avoid cold bridging.



Fit 15L/sec extractor fan to En.Suite ducted to external air

Construct new studwork walls from 75mm x 50mm softwood battens at max.400mm centres with noggings at max.1200mm centres.Fix room sides 15mm plasterboard and skim finish.Solid fill wall with 100mm mineral fibre insulation.Exact studwork layout to be confirmed on site with client to suit shower tray.

PROPOSED FIRST FLOOR PLAN



ALL TIMBER TO BE SC3 GRADE,DRY GRADED TO BS4978 AND MARKED "DRY" or "KD"

30x5 m/s anchor straps (S) @ 2m ctrs with solid strutting beneath.Notch straps into minimum 3no. joists and fix with two nails.

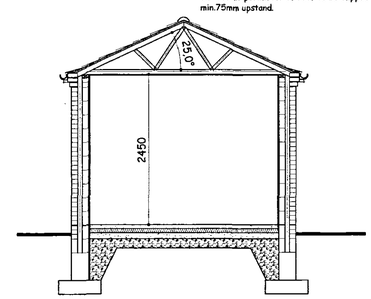
Lay 22mm Weyroc Tongue and Grooved flooring grade wood particle boarding or equal approved on top of first floor joists with staggered joints

150 x 50 joists @ max.400mm ctrs. Solid herringbone strutting @ mid point to spans over 2m. Strutting at third points to span over 4m. Joists to be supported at all junctions with approved Joist Hangers with 75mm min. bearing on masonry and joist.Joist to be cut accurately for a tight fit in hanger with max.6mm gap. Joist bottom to be notched to keep ceiling line level.

All cut ends of joists to be sealed with suitable preservative

PROPOSED JOIST PLAN
Not to Scale

PROPOSED SECTION
Scale 1:50



PROPOSED SECTION
Scale 1:50

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 archor straps as described in notes elsewhere.

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.

ROOF FINISH
Sandtoft or similar approved Concrete Interlocking Double Pantile with min. 75mm headlap & max. gauge 345mm (9.7 tiles / m²) fixed in accordance with manufacturers instructions and in accordance with BS 5534:Parts 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 weathertight 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 BS5534: Part 1. The ends of the battens should be sawn 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.

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 that area, any abnormal conditions should be brought to the attention of the Client and Local Authority.

The notes shown are mainly to cover the requirements of Building Regulations and should not be treated as full specification.

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 drawing are all subject to confirmation from Structural Engineer.

All materials not specified to be of a standard suitable for the work proposed and be fit

SHDC
Planning & Development
17 SEP 2004
Ref: 1239/04

Client :
Mr R Ward
No.6 King George 5th Ave
Holbeach
PE12 7PL

Site : Proposed Ground Floor Bathroom & Utility Rear Extensions with 1st Floor Bedroom & En.Suite Side Extension

remway design Ltd
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PLAN
4 Brandt Way
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Tel: 07815 112 068
Fax: 01775 768 921
e-mail: jason@remwaydesign.co.uk

Date : aug04 | Scale : 1:50 / 1:100

Drawing No: rem 255 - 01