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

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

Lean to roof to be constructed from 100 x 50 rafters and ceiling joists. Remainder as main specification notes.

Construct new studwork walls from 89 x 38mm CLS softwood battens at max.600mm centres with noggings at max 1200mm centres.Fix room sides 12.7mm plasterboard,scrim tape all joints and skim finish.Pack with 75mm mineral fibre insulation.

Provide 100mm mineral fibre insulation between floor zone to all new areas

New stud wall as spec'n

Tie new blockwork to existing with"Strong Tie Connectors" or similar approved.

SVP to terminate 900mm above opening window and fitted with st st l birdcage.

Fit ceiling mounted extract fan to En.Suite with rigid ducting kit as Utility.

All internal lintels to be Box 100 unless noted otherwise.

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

New brickwork to be "Toothed In" with existing.Contractor to confirm to Client fesibility of keeping existing w.c wall or demolish and re-build as new.

Existing internal brickwork to be finished to match extension

Create new door opening via C850 lintel @ 1200mm long. Finish to match.

Fit 15L/sec extractor fan to W.C

Air admittance valve to be fitted to SVP to W.C

Extent of Wall & Floor tiling to be agreed with client on site.

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

Note: Provide energy efficient lights and bulbs to Family Room.The light fitting is to only receive a bulb that has a luminous efficacy greater than 40 lumens per c/watt-watt.

WASTE SIZES FOR NEW PLUMBING
All new pumbing 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
S.INK=40mm ø uPVC with 75mm Deep sealed trap
SHOWER=40mm ø uPVC with 75mm Deep sealed trap
Provide access points to all charges in direction.Provide anti-s phon traps where pipe runs exceed 3m and W.H.B pipe run exceeds 1.8m.

RAINWATER DRAINAGE
uPVC guttering and downpipes to clients approval.Fals 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

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 poly-thene sheet and backfill with clean topsoil.Note the soakaway inlet pipe must discharge to the centre of the soakaway in all directions.

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/m K 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 need increased insulation thicknesses for the purpose of protection against frost, refer to BRE Report No. 262 2002 Edition.

Supply new 203 x 203 x 71UC to carry first floor joists. Beam to have 250 x 100 x 10 thk bearing plates both ends welded to w/side where supported on walls bearing onto minimum 7.0 N/mm² blockwork & 250 x 10 continuous plate on top. Beam to have min. 30mins Fire Resistance.

Supply new 152 x 152 x 30UC over window to carry first floor joists. Beam to have 250 x 100 x 10 thk bearing plates both ends welded to w/side where supported on walls bearing onto minimum 7.0 N/mm² blockwork & 250 x 10 continuous plate on top. Beam to have min. 30mins Fire Resistance.

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

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.

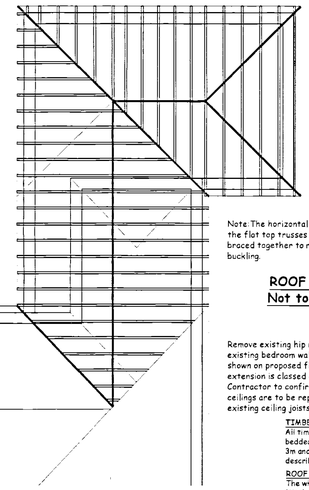
Hip Rafters to be birdsmouthed over Pre Fabricated Compound Girder of Flat Top trusses and wallplate

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.

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

Compound Girder of flat top trusses permanently fixed together

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.

ROOF PLAN
Not to Scale

Remove existing hip roof as shown to allow existing bedroom wall to be removed as shown on proposed first floor plan.After extension is classed as being water-tight. Contractor to confirm to client if existing ceilings are to be replaced depending upon existing ceiling joists span

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.

Soffit and fascia profile to clients requirements fitted strictly in accordance with manufacturer's recommendations

Trussed Rafters to main house 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.

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

PROPOSED FIRST FLOOR PLAN
Scale 1:50

BLOCK COMPARISON TABLE (To achieve a 'U' value of 0.35W/m²K)		
Manufacturer	100mm thk Blockwork	Full Fill Cavity insulation thickness
Thermalite	Shield	65mm
Plasmor	Fibalite	85mm
	Agilite	85mm
	Straglite	85mm
	Plascon	100mm
Tarmac Topblock	Hemelite	85mm
	Lignacite	85mm
	Toscrete	100mm
	Durox Supablock	65mm

FOUL DRAINAGE
Underground drains to be as rainwater drainage but with min.1:80 and max.1:40 falls.Fall of drains from gullies to be min.1:20 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 materials 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 rodddable access to all changes in bends and junctions.Contractor to ensure no live drains run beneath proposed works.

All new window opening vents to first floor to allow means of escape in an emergency situation.Opening vent to be min.450 wide in each direction with an area of 0.33m².Cill level to be within 800mm & 1100mm of FFL and fitted with egress hinges

PROPOSED GROUND FLOOR PLAN
Scale 1:50

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

GROUND FLOOR
65mm mortar screed with a light gauge reinforcing chicken wire on 500 gauge polythene separating layer on a 50mm 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.ion 100mm thick BEN3 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 6430002 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.

EXTERNAL WALLS
All external walls to be 275mm overall thickness comprising of:
-100mm Facing 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 d stort 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 Thermastop or s milar approved Insulated cavity closers fitted strictly in accordance with manufacturers instructions. Roof insulation to be continous 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 work 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 equaled 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.

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
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.

WINDOWS & DOORS
All windows to be 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 drought sealed.Provide frosted glass to all Bathroom, W.C's and En-suite windows.Ensure windows & doors are fitted within masonry reveal to overlap cavity closer by min. 40mm to avoid cold bridging.

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

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 w/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.

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.

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 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 roll's of insulation to be close butted.

CEILINGS
All ceilings to be 15mm plasterboard to BS1230.
Ceilings to be have Coving and skim 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

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

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 noggings and packing. Attach to timber members with four steel screws or four 4 mm x 75 mm round nails for roofs and two into each joist for floors. The turn down end 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 8SWG 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.

PROPOSED FRONT ELEVATION
Scale 1:100

PROPOSED SIDE ELEVATION
Scale 1:100

PROPOSED REAR ELEVATION
Scale 1:100

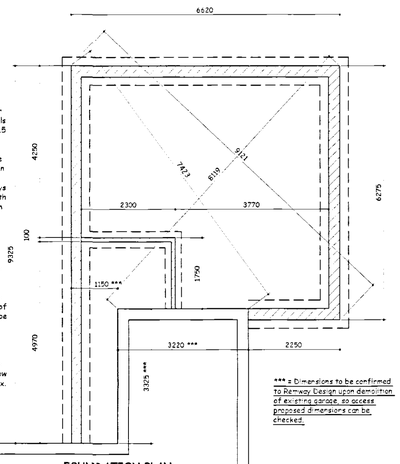
Brickwork features to match existing

PROPOSED SIDE ELEVATION
Scale 1:100

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.

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.Bath to be w/min 225mm of DPC level.Cavity to be filled to w/min 225mm min. of below DPC with lean concrete mix.

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 6EN3 in accordance with BS5328:1981.Foundatures 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.



*** = Dimensions to be confirmed to Renway Design upon demolition of existing garage, so access proposed dimensions can be checked.

FOUNDATION PLAN
Not to Scale

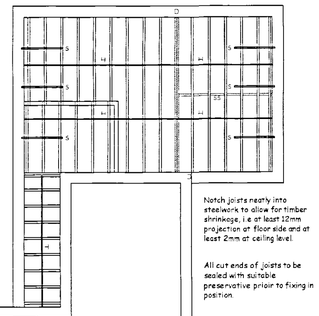
30x5 m/s anchor straps (S) @ 2m ctrs with solid strutting beneath.Notch straps into minimum 3no. joists to allow level floor boards.

200x50 joists @ max.400mm ctrs. Solid herringbone strutting (N) @ 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.

Where joists are supported off internal walls ensure overlapping Joists are nailed together and ensure overhang does not exceed 100mm to limit cantilever movement unless fixed to joist running at right angles.

Provide solid blocking at the ends of herringbone strutting between last joist & wall and underneath all restraint straps

Lay 22mm Weyroc Tongue and Grooved flooring grade wood particle boarding or equal approved on top of first floor joists with staggered joints in a brick bond pattern. Allow a min.12mm gap around perimeter where boards abut a solid wall. Unsupported ends must be supported by noggins.Apply a generous bead of approved wood adhesive to the top of the joists prior to laying the boards. Boards should be fixed using anti rust annular ring shank nails min.55mm long positioning nails 15mm in from each end of panel with a further nail equidistant between i.e 3 nails across the width of each panel.Screw fixings may be used for an even more comprehensive fit.



PROPOSED FIRST FLOOR JOIST PLAN
Not to Scale

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

Notch joists neatly into steelwork to allow for timber shrinkage, i.e. at least 12mm projection at floor side and at least 2mm at ceiling level.

All cut ends of joists to be sealed with suitable preservative prioir to fixing in position.

Double up joists (D) underneath blockwork & studwork wall and solid strutting (SS) reg'd where studwork wall runs at right angles to joist span.

First and last joists to all areas to be clear of wall by 25-50mm.

Timber solid strutting
Solid blocking should be at least 38 mm thick and extend at least three quarters of the joist depth. The blocking should be close fitting and be fixed either by skew nailing or by offsetting the blocks and end nailing through joists.Full depth blocking should be avoided, since it could project above or below the top or bottom of the joist at some point in its length. This will result in an uneven deck surface and, since the deck or ceiling will not then be in full contact with the joists, could cause nail popping and subsequent noise from movement on the nails.Blocking should be tight fitting, yet not oversized as this may cause distortion in the joists.
Timber herringbone strutting
Timber herringbone strutting should be at least 38 x 38mm but should not be used where the distance between joists is greater than approximately three times their depth. This is because at shallow angles, the effectiveness of the strutting is significantly reduced.
For maximum efficiency, the timber herringbones should be nailed towards the top and bottom edges of the joists and should be in full contact . They should not stand proud of the joists as this would interfere with the fixing of decking and ceiling linings. The struts should not be in contact with each other.
Proprietary strutting devices
Care must be taken to ensure that there is a sufficient gap left to avoid contact at the crossover between pairs of struts in herringbone arrangements, since this may result in noise during service.
Proprietary strutting systems should be specified and installed in accordance with the manufacturer's recommendations.

SKDC
Planning & Development
01 JUL 2005
Ref: 0587/05

Rev "B" - 11.05.05 - Amended to suit the Planning Dept

Rev "A" - 08.03.05 - Amendments to Kitchen Extension shown clouded

GENERAL CONDITIONS - Contractor to make Reference to G.C. Cirtir Conditions.

DETERMINED PLAN

Client :
Mr & Mrs C Drewry
North Holme
Postland Road
Crowland
PE6 0JB

Site :
Proposed Two Storey Rear / Side Extension

renway design Ltd
3, Rembrandt Way
Spalding
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PE11 3HX
Tel: 07815 112 058
Fax: 01775 768 921
e-mail: jason@renwaydesign.co.uk

Date : dec04 | Scale : 1:50 / 1:100

Drawing No:
rem 953 - 02 "B"