STORM DRAINAGE.
Fit 112mm dia h.r. rainwater gutters at 1:600 falls or level depending on length etc (shown on elevations) & 68mm dia upvc downpipes to BS 4576: Part 1: 1989 & strictly to the manufacturers instructions or aqueline. Gutter brackets at 2mt c-cs. & necessary outlets and stop ends etc. Downpipes to be secured using the necessary proprietary clips and all the necessary offsets and swan necks etc. Downpipes to be connected into Underground drains via adaptor. Underground drains to be 100mm dia Hepworth Supersleeve or Osma uPvc 110mm dia, or sim approved), with flexible joints laid on 100mm pea gravel and min 150mm surrounds laid to Falls of 1:100 run to 1m cube rubble filled soakaway min 4.5m from building & 3.5m from boundaries. Fill soakaway hole with rubble to within 450mm of ground level overlayed with polythene sheet and backfilled to ground level with topsoil. All work carried out to BS 8301 1985. Provide access rodding points as shown on plan at change in directions.
ALL EXISTING DISCHARGES & SOAKAWAYS TO BE INVESTIGATED/ REPOSITIONED WHEN WORK COMMENCES. ENSURE NO LIVE DRAINS EXIST BENEATH PROPOSAL.

SOIL DRAINAGE.
Underground drains to be as Storm Drains above with falls of Min 1:80 and Max 1:40. Fall of drains from gullies to be 1:40. Drains running through walls to have Pre stressed concrete lintels provided over. Provide min 50mm space around, filled with compressible material, opening to be masked with durable rigid sheet to prevent the ingress of fill or vermin or a length of pipe (as short as possible) built in with joints as close as possible to the wall faces/within 150mm) and connected to rocker pipes with a length of at most 600 mm and flexible joints. A drain trench should not be excavated lower than the foundations of any building nearby unless either where the trench is filled with concrete up to the lowest level of the building or where the trench is further than 1mt from the building, the trench is filled with concrete to a level below the lowest level for the building equal to the distance from the building, less 150mm.

Provide roddable access to all bends and junctions. Lowest connection to S.v.p. min 450mm above adjacent drain invert. Min fall 1:40. Install inspection chambers. If less than 600mm deep & with max one branch per side use 250mm dia Osma type Upvc i.c. or Hepworth 225mm dia vitrified clay i.c. Chambers 600mm to 1000mm deep use Osma 450 Dia polipropylene on 150mm granular or concrete bed. (or Hepworth). Inspection chambers over 1000mm deep to be 1200 x 750mm on 150mm C20P concrete base with 215mm Class B engineering brick walls with a grade B medium duty cover unless stated. Access to Inspection Chambers over 1.2mt deep to be restricted.
Lightweight inspection chamber covers to be screw down type.

Run drains to Existing Connection to Water Authorities Specification. All drains to be tested to Local Authorities satisfaction and BS 8301.

SOIL WASTES ABOVE GROUND.

Install 110mm dia. upvc. S.v.p to head of drain terminating min 900mm above nearest opening window with durable cage cover. 75mm dia above roof or terminate via a ridge vent. W.c. wastes in110mm dia upvc. Bath waste in 50mm dia upvc. Sink, Shower, washing machine wastes in 40 mm dia upvc. Washing machine to have necessary upstand trap Basin wastes in 32mm dia (or 40mm if required). Wastes exceeding 1.7mts in length to have anti-vac traps fitted. Wastes not exceeding 1.7mts in length to have 76mm P.Traps fitted. Provide shower on raised plinth to allow access to shower trap (75mm). Provide trapped gulley (as indicated on floor plans). Kitchen and Utility wastes to have bottle gullies fitted with roddable access etc. Install stubstacks as shown with screw down sealed cap or air admittance valve as indicated on plan. Sockets to both S.v.ps and Stubstacks to be min 450mm above drain invert. Bend at foot of Svp to have min radius of 200mm at the centre line.

FOUNDATIONS.
Concrete strip foundations min depth 750mm (or 1mt if soil is of a shrinkable nature) to be agreed on site with B.C.O. Any reinforcement to be incorperated as sections. Any irregularity in subsoil/ filled ground to be reported to Agent /B.C.O. for remedial advice or seek the advice of a Chartered Structural Engineer. Foundation width shown on floorplan layout.
Widen founds around chimney breast.
Grade GEN 3 Concrete (unless stated otherwise). Concrete to BS 5228. BS8110. Aggregates BS882.
OR
FOUNDATIONS AND FLOOR
See Reinforced Concrete Raft Foundation (and Ground Investigation Report) as designed by Clients nominated Structural Engineer. See also additional notes details on floor d.p.m. and insulation /screed.

FLOOR.
150mm blinded and consolidated hardcore backfilled and rammed to internal foundations, compacted in 225mm layers. 1200g polythene d.p.m. linked to wall dpc. Min 150mm d.p.m. laps. Lay 100mm Jabfloor 70 type Jablite insulation over polythene with the joints taped and perimeter upstand all in accordance with the Manufacturers specification. Perimeter insulation to be installed to manufacturers details which does not penetrate through the screed. Clarify on site.

NOTE: POLYTHENE D.P.M. MAY BE LAID ON TOP OF JABLITE IF AGREED BY B.C.O. INSPECTORS. 100mm site concrete (GEN 4 Grade or RC 30 where reinforcement is incorperated). 65mm sand /cement screed.
All new and existing floors to be level. Take out existing brickwork in new opening down to invert of hardcore level to avoid hardspots.

D.P.C.
Install Astos or similar d.p.c. to BS6398 min 150mm above G.L. and 18mm thick Damcor insulated d.p.c. to all reveals. Fit dpc to external lintels (See lintel notes).

MASONARY/WALLS.
Render blockwork and bwk as existing to all elevations.
103mm facings to match existing to all elevations. 75mm cavity with 75mm. Dri-therm installed to manufacturers instructions to extend 150mm below the perimeter insulation of the floor.
6no s/s or galv wall ties to BS 1243 at 900mm centres horizontally and 450mm centres vertically. 225mm centres at all jamb openings. Masonary bricks and blocks to be to BS 3921, BS 6073 Part 1 and BS 5628. Mortar 1:1:5 cement: lime: sand with airentraining.
Lay CELCON, THERMALITE OR DUROX internal thermal block with 12mm thick, 2 coat gypsum plaster/skim finish. Incorporate piers as indicated. Use Catnic/Furfix or Bluebird fixings to tie new to existing with ties to manufacturers spec at 225mm c.cs.through 12mm Compribond v membrane sealed over externally with a 12x20mm polysulphide sealant. (SHOULD any BLOCKS NOT LISTED ABOVE BE INSTALLED CHECK MANUFACTURERS DETAILS AND INSUALATED CAVITY WIDTH TO COMPLY WITH NEW B-REGULATIONS REQUIREMENTS OF 0.35).
Walls to achieve a 'U'Value of not exceeding 0.35m2 degrees C.
External Rendering. Rake out joints 10mm in blockwork Outer Skin in 100mm blockwork with render finish. Finish to consist of 2 coats of rendering to BS 5262.(also any guidelines set out by Block manufacturers). Joints to blockwork to be raked out 10mm. Render mix to be 1 part cement: 1 part lime: 6 parts well graded sharp sand. Nominal mix 1:1:6.Install steel render stops Ref.547 above openings and d.p.c. (Bell Stop).

LINTELS.
Install I.G. type steel lintels to manufacturers instructions., min end bearing 150mm. All external lintels to have a tray d.p.c. installed in accordance with BS 5268 which should extend to the edge of the toe and at least 100mm beyond each end of the lintel to shed moisture clear of reveals. See ref nos on plan. Ensure lintels have manufacturers insulation installed.

VENTILATION.
All HABITABLE ROOMS to have ventilation openings equal to 1/20th floor area of the room and with some part of the ventilation opening at least 1.75m above the floor level. eg Opening window. HABITABLE ROOMS to have trickle ventilators in top of window frames with controllable and secure ventilation opening min 8000mm sq.(draught secure).
UTILITY ROOM to have an opening window (no minimum size). Background Ventilation of 4000mm sq. Mechanical Extraction 30 litres/second or Passive S.V.
BATHROOMS (WITH OR WITHOUT W.C.) to have openable window (no minimum size). Background Ventilation of 4000mm sq. Mechanical Extraction of 15 litres/second or Passive S.V. Where no window fitted Mechanical ventilation to be provided with the fan having an overun of 15 minutes and is controlled automatically or manually. Also air inlet to be provided eg a 10mm air gap below the door.
SANITARY ACCOMMODATION SEPARATE FROM
BATHROOM to have openable window 1/20th of floor area or mechanical ventilation at 15 litres /second per Background Ventilation of 4000mm sq.

WINDOWS, DOORS AND GLAZING.
Escape windows are now required to all first floor habitable rooms in a house even if they are not inner rooms.
A fully opening window of minimum 450mm x 733mm. of any orientation will now Comply.
Windows and Doors as drawing with U.P.V.C. 16mm gap Pilkington Low 'E' 05 double glazing installed. Fix windows 150mm from each end of jamb, adjacent to each opening jamb and at max 600mm c-cs. All windows to be as specified on plan as calculated for the Building Regulations etc. Any alterations to be agreed with Agent and Building Control Before ordering etc. Also if windows are ordered different from plan and are not available when work commences on site please ensure profiles are checked against dimensions ordered etc. Glazing laminated or toughened glass to BS6206, Class B in the following critical locations. WINDOWS 800mm or less above floor level, within 300mm of a door and 1500mm or less above floor level. DOOR: 1500mm or less above floor level. EXCEPTION; small panes, maximum 250mm wide not exceeding 0.5m2 may be 6mm annealed glass.
All windows and doors to be draughtproofed.
All doors to be double glazed.
Bow and bay windows to have G.R.P.Canopy or lead Canopy over.
Support brackets and Exterior grade 19mm Plywood window board and nosing.

JOINERY (INTERNAL).
Standard mouldings, architraves and skirtings to Clients choice/specification.

TIMBER.
All timber to be SC3 Grade.

CEILINGS.
12.5mm plasterboard ceilings throughout to BS 1230 and installed to manufacturers details. Support all joints and edges of boards with timber noggins. Tape all joints. Artex and cove finish to Clients requirements. Ensure boards are layed perpendicular to joist span and joints staggered and fixed at min 150mm c-cs.

SMOKE DETECTION.
It is advisable that at least Battery operated smoke alarms to BS 5446: Part 1 are installed in circulation areas within 7000mm of doors to high risk rooms and within 3000mm off bedroom doors. At least one smoke alarm to be installed to each storey. Fixing of smoke alarms should be not less than 300mm from any wall or light fitting. Where wall mounted units are installed they are to be a height between 150mm and 300mm below ceiling. Occupants of property to be provided with information on the use and maintenance off the equipment.

ELECTRICAL.
Electrical installation to comply with the latest Edition of the IEE wiring regulations. All Light fittings to Energy Efficient Type.

SPACE HEATING AND PLUMBING.
Install Oil Fired boiler to manufacturers and heating engineers specification. SEDBUK 85%.
Flue to be balanced flue type with cage guard cover over if lower than 2mts from ground level. Ensure min 600mm from any opening. Gas Boiler to be installed to Corgi Requirements concerning Location of flue in this instance i.e. Check Clearance for Rating and Type of Boiler to an opening door and window. Also below eaves and guttering and will be at least 300mm from soil and vent pipe.

Operating and maintenance instruction for heating and hot water system should be provided to the owner/occupier of the property. Commissioning Certificates will need to be provided for the heating and hot water system from the Heating Engineer.

Install radiators to rooms. Radiators to have thermostatic valves fitted and flow control devices are required such as pressure bypass valves are required to prevent unnecessary boiler cycling.

Install 117 litre hot water cylinder Complying with BS1566 or BS3198 to of the pre-insulated type. fitted with a 3kw immersion heater and thermostat and timer controls.

Thermostat should be provided to not only shut off the supply of heat when the required temperature is reached but also in conjunction with the room thermostat, to shut off the boiler when no heat is required. A timer is also required to shut off the supply of heat for the periods when water heating is not required.

Cylinder to be the vented type. Provide slatted shelving in airing cupboard as required. See also insulation notes.

Oil Tank Position to be more than 1800mm from Building and at least 760mm from a boundary.
Tank to be bunded with masonary as guidelines for Oil Storage Tanks and capable to have 10% greater capacity than tank. Pipework from the oil tank to be fire resistant and fitted with a proprietary valve system.
Oil Storage tank to carry a label in a prominent position giving advice on what to do if a spillage occurs including the telephone number of the Environment Agency.

FIRST FLOOR.
18mm t & g moisture resistant flooring grade chipboard type C4 to BS5669 on joists at 450mm ccs or less or use 22mm thick if joists are at 600mm ccs. Size and span shown on the floor plan All Floor joists at external walls to be supported in hook over type joist hangers.
Double up joists under partitions bolted together with 6mm dia m/s bolts and toothed timber connectors at min 1500mm ccs and 150mm from ends at mid depth of joists. Double up joists around stairwell AS FLOOR PLAN LAYOUT.
Trim out and support joists in m/s joist hangers to BS6178 Part 1, mechanically fixed or to manufacturers details. Install Catnic herrinbone strutting or 38x38mm s.w strutting at mid span of joists over 2.5mt and at third span on joists over 4.5mts span. See also Lateral Restraint notes.

STUDWORK PARTITIONS.
Construct studwork partitions in 44x72 Ridgeons Structurall KD sw studs at 600mm c-cs, head and sole plates fixed down to floors and ceilings as necessary. Alternatively install 100 x 38mm studs at 400mm c-cs off 100x50mm head and soles plates. Install 2 rows of horizontal noggins between studs. Incorporate doors and frames as indicated. Clad with 12.5mm plasterboard to BS 1230 Part 1 fixed at 150mm c-cs min or less or use 9.5mm thick on stud centres at 400mm c-cs. Skim with 4mm finish.

ROOF.
Lay concrete interlocking roof tiles to BS 402 and (min 75 lap) Type as plan and to manufacturers specification on 25x38mm tanalised sw tile battens and untearable roofing felt to BS 747 Type 1F, with min 150mm lap in each direction on ready made ~~built-up~~ raised tie type trusses to match existing. CHECK ROOFPLATE WIDTHS AND EXISTING BEFORE ANY ORDER PLACED.
Trussed rafters at 600mm c-cs and designed and fabricated to BS 5268. Manufacturers certificate and calculations to be submitted to BCO for checking before roof work commences. Roof bracing to be to BS 5268 and 25x100mm SC3. Diagonal bracing running from eaves to ridge at underside of rafters (also on top of ceiling joists running from eaves to inner binders if shown on section). Lap joints if necessary and nail to each rafter with 2no. 10 gauge galvanised nails. (Also web bracings at approx 45 degrees in plane of webs. Fixing as before and shown on section if required depending on span). 25x100mm Binders at ridge and node points fixed as above. Trusses to be fixed to 50x100mm wall plates bedded in 1:4 cement mortar with galv truss clips.

Install Compound/girder truss with truss ends fitted in M/s joist hangers fixed to compound. These details to be in strict accordance with truss manufacturers details. Details to be submitted to BCO before work commences on roof structure.

Incorporate layboards, deminishing trusses and GRP valley trays/tiles/ Code 4 lead to roof intersections.

Offset fascia board 150mm from brickwork. Fit over the fascia type vents to achieve min 10mm continuous air gap full length of eaves. Install roof vent RV601 between rafters and over plates to ensure airflow over insulation.

Any Softwood eaves and ext roof to be to BS 4978 and BS 5268 treated to British Wood Preserving Association Commodity Specification C. Site cut sw to be saturated with appropriate preservative where cut etc.

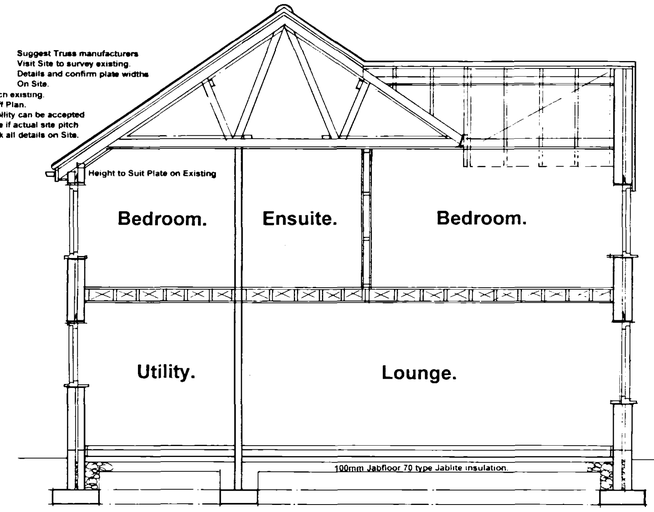
Build up 2 course oversail in brickwork to gables. Box corbel at eaves. Corbel at 150mm per 4 courses with brick tor reinforcement mesh incorporated every 2nd course bed back into main wall (or Galv Ties).
Install loft hatch to manufacturers recommendations and trimming out etc.
Install any water tank supports to manufacturers specifications depending on span and capacity of tanks etc.

INSULATION.
Install 100mm Gypglass fibreglass mineral wool quilt insulation between ceiling joist/bottom chord of trusses and 150mm Gypglass fibreglass mineral wool perpendicular over top as shown on section. All exposed pipework and ducts together with storage vessels to be adequately lagged in accordance with Part L of the Building Regulations. Flow and return pipes to hot water vessel to be insulated for at least one metre from their points of connection. Insulation to be minimum of 15mm thickness. Ensure all ducts and pipework through ceilings/ floors/and hollow constructions or voids are sealed around.

LATERAL RESTRAINT STRAPS.
Tie roof structure to blockwork with Catnic straps at 2mt c-cs. Prefix H.L. type straps along wall plates, 30 x 5 x 1000 long. Prefix H.L. at gable walls where rafters and ceiling joists are parallel to walls spanning over min 3 members. Pack beneath H.L. straps and wall/structural member with solid bridging noggins. Noggins to extend at least half the depth of the joist and at least 38mm thick. (Or use binder positions if B.C.O. in agreement). Screw and plug fix straps to blockwork.

GENERAL GARAGE NOTES.
Render exposed faces of lintels with lime mortar. See also Fire Door and floor/ceiling notes. Fit up and over metal door and frame to manufacturers require-ments and clients choice etc. Check on size before setting out and ordering etc.

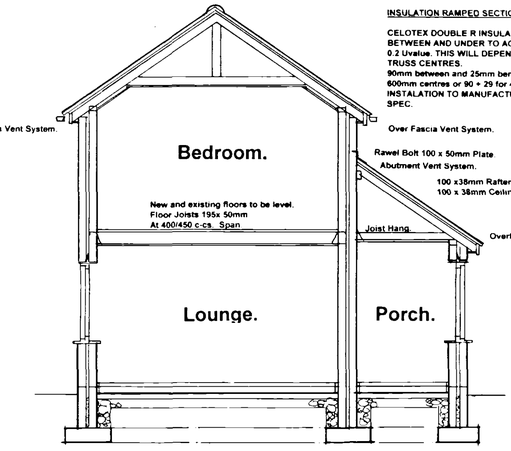
FLASHINGS.
Code 4 or 5 Step and cover lead flashings to all roof/wall abutments to BS 1178 wedged into brickwork 25mm. Cavity trays in conjunction with flashings are to be installed where roofs abut external cavity walls and manufactured weeps to be installed at 1000mm centres (4th Perp). Colour to blend.



Fit Hip Irons at hip corners. Tie wall plates at hip corners with galv m/s straps along outer faces.
Ridge tile hip ends.

SECTION a.-a.

SEE SOILS INVESTIGATION REPORT ALSO



INSULATION RAMPED SECTION

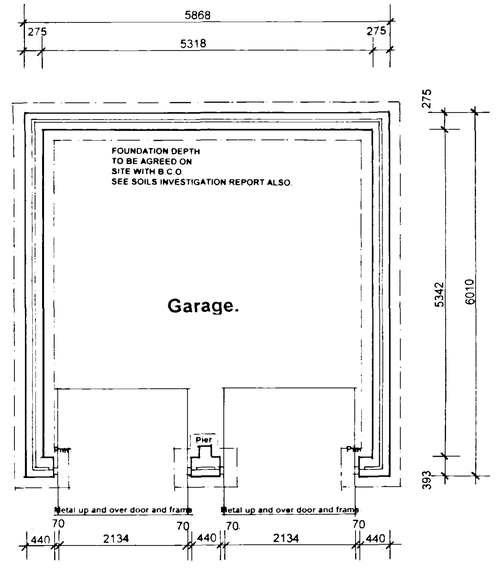
CELOTEX DOUBLE R INSULATION BETWEEN AND UNDER TO ACHIEVE 0.2 Uvalue. THIS WILL DEPEND ON TRUSS CENTRES.
90mm between and 25mm beneath for 600mm centres or 90 + 29 for 400 c-cs.
INSTALLATION TO MANUFACTURERS SPEC.

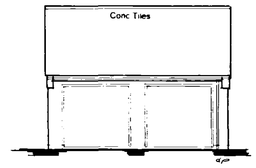
Over Fascia Vent System.
Rawel Bolt 100 x 50mm Plate.
Abutment Vent System.
100 x38mm Rafters at 400mm c-cs.
100 x 38mm Ceiling Joists at 400mm c-c
Joist Hang.
Overlap Wall insulation with roof insulation.

INSULATION FLAT CEILING SECTION.
100MM GYPGLASS FIBREGLASS MINERAL WOOL QUILT INSULATION BETWEEN CEILING JOIST/BOTTOM CHORD OF TRUSSES AND 150MM GYPGLASS FIBREGLASS MINERAL WOOL P.ERPENDICULAR OVER TOP.

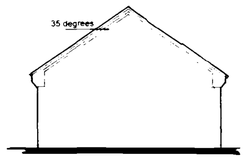
SECTION b.-b.

GARAGE DETAILS.

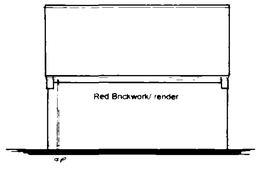




FRONT ELEVATION.



SIDE ELEVATION.



REAR ELEVATION.

GENERAL NOTES
Do Not Scale from drawings, if in doubt ask.
Contractors are responsible for checking all dimensions on site when work commences and before ordering materials.
Any discrepancies should be brought to the attention of the Designers for remedial advice as soon as possible.
All details shown on the drawing are based on typical site conditions for the area.
No responsibility can be accepted for any abnormal conditions. Any such conditions to be reported to designer for amendments or the Professional services of a Chartered Structural Engineer to be sought.
The notes shown are mainly to cover the requirements for Building Regulations. They are not a full Specification.
If materials, products & workmanship are not fully specified they are to be of the standard appropriate to the work and suitable for he purpose stated above and all work to be in accordance with good building practice and in accordance with BS8000 for Workmanship on Building. Sites to the extent that the recommendations define the Quality of the finished work. All materials, products and workmanship to comply with the appropriate BS and EOTA (European Organisations for technical Approval) Standards with, where appropriate, BS or EC marks.
All materials and products to be handled/stored and used fixed in strict accordance with the manufacturers recommendations.
Arrange Inspections of the works by Building Control Officer B.C.O. Obtain Completion Certificate and forward to Employer/Owner.

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SHDC
Planning & Development
10 JUL 2003
Ref 0865/03
DETERMINED
PLAN

SHEET 2 of 2. BUILDING REGS ISSUE A

Architectural
Design Services.

S.J.Thrower.
3 Newgate Road, Tydd St.Giles, Wisbech, Cambridgeshire.
Tel Fax. 01945 870022.

Proposed Extension, Alterations and Garage at No.1 Horsmoor Drove, Sutton St.James, Spalding. For. S.Ferris.

Notes/Sections & Garage.

Scale 1: 50. 1:100	Date. Apr 03.	Drwn.	Chkd.

Drwg no. SH/ 94103.