insulated non-loadbearing insulated timber framed walls

soil vents

21 22 23 24 25 26

bathroom bathroom linen linen landing arch wardrobe 27 bedroom 1 bedroom 3 bedroom 2

215mm rebated flue liners with insulated surround

FIRST FLOOR LAYOUT

timber stud walls

internal tie walls in blockwork

roof access

longitudinal bracing

diagonal bracing

anchor straps

truss rafters at 600 mm c/s

restraint straps (rafters)

restraint straps (ceiling joists)

100mm non loadbearing wall built off steel beam

stair well size

girder truss

FIRST FLOOR DIMENSIONS AND ROOF LAYOUT

conservatory

cooker kitchen breakfast area dining room

dryer washer utility gully boiler

ceiling fan radiator

toilet

double seal chamber

sealed access

roof storage access via loft ladder and hatch with half hour fire resistance

garage study hall lounge

solid fuel fire with non-combustible hearth

half hour fire resistant ceiling

porch

rwp soil pipe gully soil pipe

double joists

truss rafters at 400-600 c/s

ventilation duct located between joists and leading to tile vent

SC4 50x170 at 400 c/s

floor joists

access trusses

38x170 SC4 400 c/s

SC4 63x170

SC4 75x170

two course engineering brick brick pads to each end of beam

lateral floor straps

178x102x19 kg/m universal steel beam, supporting blockwork with a maximum density of 1400 kg/sqm Appendix 6·5·A NHBC Half hour fire protection to beam

LINTEL SCHEDULE AND WINDOW OPENING SIZES

OPENING	WIDTH	HEIGHT	CATNIC LINTEL Ref.	LENGTH
No 1	0.900 m	1.000 m	CG50/100	1.200 m
No 2	2'-9" door		CG50/100	1.200 m
No 3	1.200 m	1.200 m	CGH50/100	1.500 m
No 4	1.200 m	1.500 m	CG50/100	1.500 m
No 5	2 No 2'-6" doors		CG50/100	2.100 m
No 6	1.800 m	1.500 m	CGH50/100	2.100 m
No 7	2.400 m	1.800 m	CG50/100	2.700 m
No 8	0.500 m	1.000 m	CG50/100	0.900 m
No 9	2'-9" door		CG50/100	1.200 m
No 10	1.200 m	1.200 m	CG50/100	1.500 m
No 11	7'-6" wide door		CN71C	2.700 m
No 12	1.200 m	1.000 m	CG50/100	1.500 m
No 13	2'-9" door		CG50/100	1.200 m
No 14	2'-9" door		CG50/100	1.200 m
No 15	Kitchen cupboard		CN5XA	1.050 m
No 16	Kitchen door		CN5XA	1.200 m
No 17	Study door		CN5XA	1.050 m
No 18	Dining Room door		CN5XA	1.200 m
No 19	Lounge/Dining opening		CN5XA	2.100 m
No 20	Lounge		CN5XA	1.200 m
No 21	1.200 m	1.000 m	CG50/100	1.500 m
No 22	1.200 m	1.000 m	CG50/100	1.500 m
No 23	1.800 m	1.200 m	CG50/100	2.100 m
No 24	1.200 m	1.200 m	CG50/100	1.500 m
No 25	1.200 m	1.000 m	CG50/100	1.500 m
No 26	2.400 m	1.200 m	CG50/100	2.700 m

Note ! all remaining internal non load bearing openings to have 1.200 m long CN102 corrigated lintels positioned above

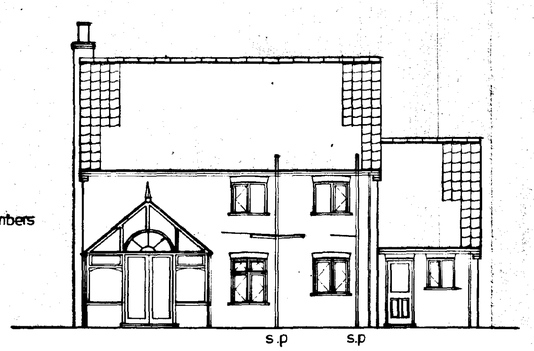
SOUTH HOLLAND DC HOUSING & PLANNING 15 NOV 1999 H/75/99

Client: MR & MRS G.R. LUNN

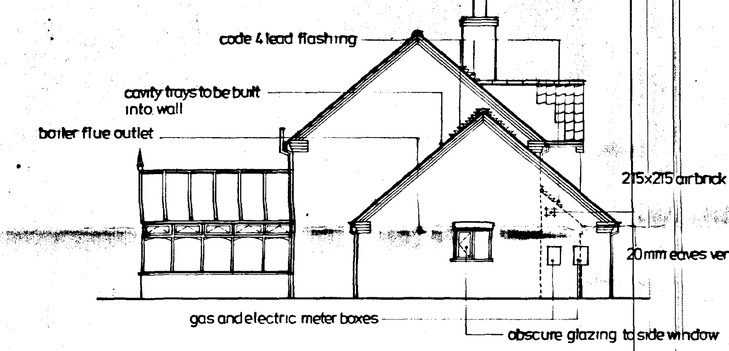
Project: PROPOSED HOUSE AND GARAGE ON PLOT 2 OFF PARK LANE DONINGTON SPALDING LINCS

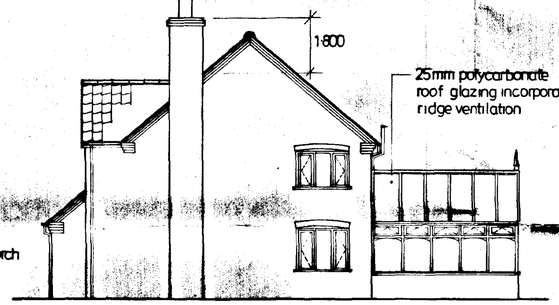
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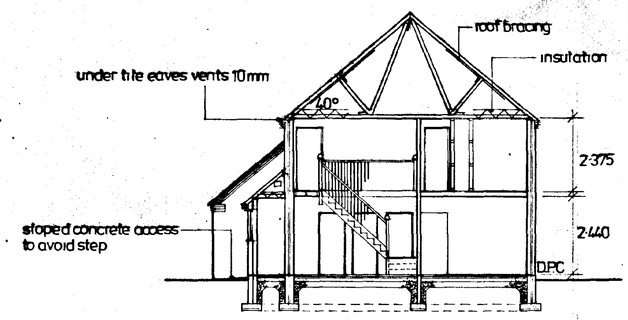


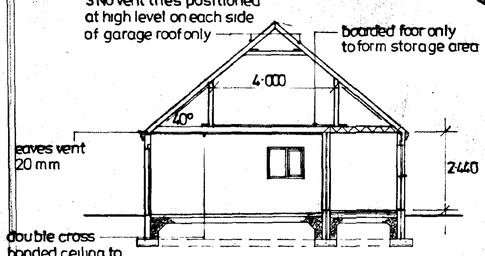
FRONT ASPECT REAR ASPECT

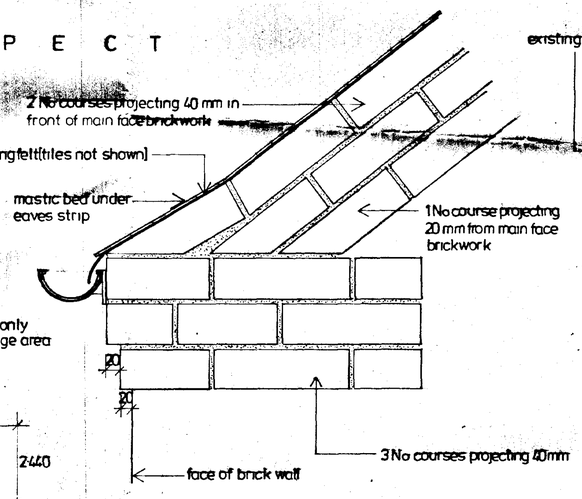




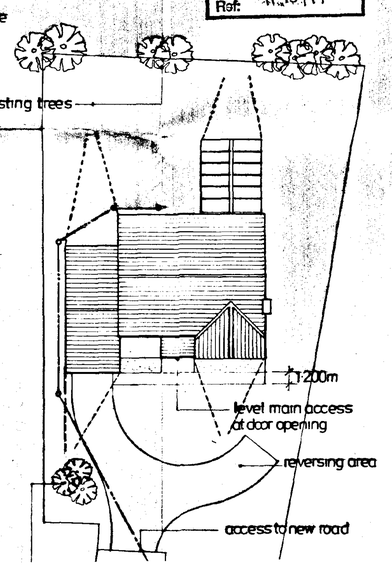
NORTH ASPECT SOUTH ASPECT







Eaves brickwork detail (scale1:5)



SOUTH HOLLAND DC
HOUSING & PLANNING
19 NOV 1999
Ref: H/25/99

SITE PREPARATION:
Set out approximate building area on mark or lean level site and strip off veg top soil to 150 mm deep to form level clean base.

FOUNDATIONS:
~~225~~ mm deep x 700 mm wide cast ~~225~~ mm x 600 mm wide (ST7 mix) concrete strip foundations incorporating A193 steel mesh positioned 50 mm from bottom of excavation. All foundations are to be taken down to a minimum suitable bearing stress depth of 1.000m with actual depth being determined and agreed on site at time of dig. Non-loadbearing walls to be positioned on 150 mm deep thickened base slab to a width of 600 mm with hardcore being deepened under to maintain 125-150 mm thickness.

FLOORS:
House
125 -0 150 mm thick consolidated 50 mm sieve limestone hardcore with sand blinding.
D.P.M 1200 gauge polythene with 300 mm minimum overlaps and turned up/over perimeter blockwork a minimum of 75 mm.
100 mm thick (ST3 mix) concrete base slab.
50 mm thick SD/N flooring grade expanded polystyrene insulation laid over bas slab with 19 mm thick ditto perimeter bridge insulation all covered and protected with 300 micron damp proof membrane with 150 mm lap and taped joints.
65 mm thick cement and sand screed incorporating galvanised 50 mm chicken wire with 100 mm laps at all joints.
Garage
125 mm thick finished concrete base slab laid on 150 - 150 mm thick consolidate limestone hardcore with blinded finish and 300 micron DPM overlay (floor to fall towards garage door).

WALLS BELOW GROUND LEVEL:
Solid concrete blocks (7N/mm sq strength) bedded and jointed in 1:3 cement/sand with admix plasticiser to manufacturers recommendations
Lean mix sand and cement fill cavity fill taken up to 225 mm below D.P.C level.

WALLS:
House
Face bricks: "Bradburn Berry Blend" from Desimpell range, manufactured by Hanson Brick.
270 mm wide cavity walls consisting of 102 mm facing bricks, 50 mm cavity with 65 mm thick insulation and 100 mm 3.5 - 4.5 (7N/mm) Thermalite or similar light weight blocks with render and plaster skim internally. Internal wall 100 mm thick dense.
Wall ties to be butterfly type in stainless steel complying with BS 1243 positioned 900 mm apart horizontally, 450 mm apart vertically and not more than 300 mm apart vertically to all openings within 225 mm of the edge of the openings.
Garage
Ditto but with front wall being built in 215 mm solid face brickwork.

NON LOADING BEAR INTERNAL TIMBER FRAMED WALLS:
Six 50 x 100 mm regularised vertical timber studs at 400 mm centres with ditto head, base plate and two intermediate rows of solid blocking.
Two 50 mm thickness of "Fritherm" semi- rigid mineral wool (at 21 kg/sqm density) positioned between all timber studs.
12.5 mm plaster board fixed to each side of timber studs with plaster skim finish.
Foil backed plasterboard to be used in bathroom/shower rooms

D.P.C.s:
Polythrylene to BS 6515 positioned horizontally 150 mm above ground level, vertically to all openings at closing of cavities and above lintels with all joints having 100 mm minimum laps.
Two course engineering brick damp proof courses to chimney stack at roof inter section level,
Code 4 lead flashings to all tile to brickwork intersections with lead tacked and pointed into brickwork 25 mm deep at least 75 mm above top tile level.
Pre-formed cavity trays to be inserted across cavity well at all tile abutments.

LINTELS:
Casnc galvanised steel lintels with 150 mm end bearings (refer to schedule) All external lintels to have full D.P.C protection above with pre-formed or folded stop ends, insect proof weep hole inserts positioned at each end and at 450 mm centres over all lintels.

Treated timber camber pieces to be cut and positioned on external bottom flange of lintels to take 215 mm high brick solider courses.
Front of timber cambers to be clad with 6 mm thick white cellular form boarding cut to profile
Cambers: 30 mm camber up to 900 mm wide openings.
80 mm ditto up 1.800 mm wide openings.
75 mm ditto up to 2.400 mm opening.

ROOF:
Main house roof - Pre-formed trussed rafters positioned and fixed at 600 mm maximum centres complete with longitudinal and diagonal timber bracing all in compliance with BS 5268 Part 3. (manufacturers structural truss calculations to be forwarded to Council Building Control Department before site fixing commences).
Garage and utility roof - Attic trusses positioned at 400 - 600 mm centres complete with ditto.
Porch roof - 38 x 100 mm SC3 cut rafters and ceiling joists fixed at 600 mm centres.
Restraint straps 5 x 30 mm galvanised steel at 1.800m long built into gable wall and fixed to rafters and ceiling joists at 2.000m maximum centres (50 x 50 mm timber blocking to be fixed between timbers under straps). Twisted anchor straps ditto at 1.000m long fixed at 2.000m maximum centres along wall plate.

ROOF COVERING:
Type: Santoft "Santoft concrete pantiles" in Terracotta Red.
All tiles and ridges to be fixed to manufactures recommendations with particular consideration give exposure levels.
Underlay - 1F reinforced bituminous felt to BS 747 with 150 mm minimum horizontal laps.
Tile Battens - 25 x 38 mm treated timber to comply to BS 5534 and fixed with 3.35 mm diameter x 65 mm long galvanised smooth or ring shank nails.
Pre-cut 150 mm wide non asbestos eaves underclook strips to gable ends.

ROOF VENTILATION:
10 mm under tile eaves ventilation to main house roof.
25 mm ditto to garage, utility and porch.
215 x 215 air brick positioned at high level in side porch gable wall.
3 No tile vents fixed at high level to each side of garage /utility roof.

FIRST FLOOR: (plans shown on first floor joist layout)
SC 4 grade timber floor joists at 400 mm centres with 50 x 50 mm herringbone strutting and full depth solid blocking between joists under timber framed cross walls (refer to layout plan).
Double joists parallel to and under timber framed walls to be bolted together with 9 mm dia m/s bolts at 600 mm centres with joints incorporating double sided tooth connectors.
Double joist to be located under bath/shower area.
Restraint straps 5 x 30 mm with 50 x 50 mm under timber blocking to be fixed to top of joists and built into wall at 2 m maximum centres along parallel line of joist to wall.
600 x 2400 x 22 mm thick water resistant tongue and grooved chipboard flooring panels fixed to top of joists with 65 mm wire nails and all joints having P.V.A. glue applied during fixing.

CEILINGS:
18.5 mm plaster board with self adhesive taped joints and plaster skim finish.
Double cross bonded plasterboard with bonding and skim finish to garage and utility ceilings
125 mm Gyproc cove cornice to all ceilings apart from garage.

FLUES:
Pan assisted wall outlet flue from gas boiler with outer cage protection.

FIREPLACE:
225 mm diameter "Bellfyre" or similar balanced flue stove fixed with asbestos uppermost and joined with hobnorn lip glue.
All liners to be positioned 50 mm from inner face of brickwork to allow for surrounding with isokern insulation (20:1 by volume cement and a little water) as work proceeds.

WINDOWS AND DOORS:
Windows u.P.V.C with side and top opening casket (frame as drawing) fixed direct to brickwork and set back to overlap the 50 mm thick expanded polystyrene (Damcor) or pre-formed insulated closer by at least 25 mm to avoid cold bridging.

Trickle head vent, units and sealing round frames (refer to Insulation Specification Notes).
External doors:
Garage door - 2.285 m wide x 1.981 m high Cardale "Silverdine" up and over garage door in steel or timber frame.
Front House Door - 3' - 0" "Cringleford" hardwood door manufactured by Rugby Joinery.
Rear utility door - 3' - 3" " u.P.V.C
French doors - 2 No 3' - 0" u.P.V.C doors.
Front door to have level access incorporating low level rubber threshold unit.

STAIRCASE:
800 mm overall width timber staircase consisting of 19 risers at 220 mm maximum rise and 13 treads at 220 mm minimum go.
900 mm high balustrading to side of staircase and landing consisting of moulded hand rail, turned newel post and balusters positioned 96 mm apart.
Actual storey height to be checked on site before manufacture.

GLAZING:
External doors and windows to take sealed units with 20 mm minimum air gap.
All glazing to windows between finished floor level and 800 mm above that level to be in safety glass in compliance with BS 6206.
All glazing to doors to be in safety glass in compliance with BS 6206.
All glazing to conservatory be "E glass"
Conservatory roof to be 25 mm thick polycarbonate sheets supported in steel reinforced u.P.V.C framed manufactured by Ultra-frame.
Roof to incorporate Ultra-Frame ridge ventile" on system.

BRICKS:
OBMA or similar 110 mm dia plastic drains laid to 1 in 60 fall (shown on layout plan) with a 100 mm thick bed and surround of 10 mm pea gravel.
Drains under floor beyond 600 mm of inner wall face to be protected with 100 mm concrete bed and surround, drains passing through walls to have 50 mm clearance all round with flexible seal to each side of opening. Pre-cast concrete lintels built into position above to support brickwork/brickwork.
Drains laid deeper that bottom of foundations that are within 1.000m of the foundation edge are to be bedded and surrounded with concrete up to base level foundations.
Inspection chambers (450 mm dia) and rodding gully points to be pre-formed , installed in positions shown and firmly supported to manufactures recommendations.
Inspection chamber in garage to have double seal frame.

INTERNAL WASTE PIPES:
OBMA or similar leading from fitting outlet trap to external gully or 100 mm dia soil pipe
40 mm dia wastes from sinks, baths, showers and washing machine with 75 mm deep seal traps and 30 mm dia wastes from wash basins with 75 mm deep seal traps.

RAIN WATER FITTINGS:
OBMA or similar 100 mm half round gutters supported at 1m maximum centres to fall towards down pipes at a gradient of 25 mm in 10m. Rainwater pipes 65 mm diameter to positions shown on drawing.
Soakaways to be not less 1.2 m dia x 1.800 m deep positioned not less than 6m from buildings.
Shingle or selected hardcore backfill to be covered over with permeable sheeting before laying top soil.

ELECTRICS:
All light switches and switch sockets to be located in habitable rooms between 450 mm and 1200 mm above finished floor level.

SPECIFICATION NOTES (Summarisation of first and second)

INSULATION
Walls - 65 mm thick Dritherm cavity insulation with 19 mm thick expanded polystyrene SD/FRA grade (Damcor insulated D.P.C.) or CFC/HCFC free polyisocyanurate foam filled uPVC pre-formed insulations (Thermobeta or similar) forming cavity closers to all openings.
Lintels - steel with polystyrene in-fill to hollow profile section.
Ground Floors - 50 mm thick flooring grade polystyrene with 25 mm vertical perimeter insulation.
First Floor Ceilings, Utility & Porch - 100 mm thick mineral wool insulation laid between ceiling joists with second 100 mm thick layer laid cross ways over joists.
Roof access hatch - 100 mm thick polystyrene secured to top side of hatch cover
Windows - double glassed units to external doors and windows to have 20 mm minimum sealed air gap.

INFILTRATION
Doors and windows to have pre-fixed continuous draught seals round all openings with all frames being sealed to masonry with silicon sealer appropriate to type of materials used in construction.
Roof access hatch - continuous draught seal to lining rebated with access cover being in compressed position to seals with two bolts or catches.
Services - holes through ceilings and external walls to accommodate services are to be closed fittings and where clearance is required for expansion purposes seals are to be applied appropriate to circumstances.

VENTILATION OF ROOMS
Habitable rooms - rapid ventilation (by means of opening lights) to an area of windows in each room equalling a minimum of 1/20th of the floor area and background ventilation being achieved by window trickle head vents giving 8000 sq mm ventilation per room.
Bathrooms/Sewer (with or without WC) - rapid ventilation (no minimum), background ventilation 4000 sq mm and mechanical ventilation at a minimum rate of 15 litres/second
Toilet without window ditto but with a time delay control on mechanical ventilator and a 10 mm air gap under door.
Kitchen - rapid ventilation (no minimum), background ventilation 4000 sq mm and mechanical ventilation adjacent to hob at a minimum rate of 30 litre/second.
Utility - rapid ventilation (no minimum), back ground ventilation 4000 sq mm and mechanical ventilation at a minimum rate of 15 litre/second.

HEATING
Water Heating - wall mounted fan assisted gas flue boiler connected to 162 litre pre- insulated 35/40 mm PU-foam covered indirect copper cylinder (positioned 80 mm clear of floor) complete with cylinder thermostat, and time controlled electric immersion heater.
General Heating - convector type steel radiators with thermostatic valves connected to indirect cylinder/oil boiler on pump supply incorporating a flow control or other device to prevent boiler cycling (all designed in accordance with BS 5449).
Fireplace:
Solid fuel open fire with solid projecting hearth raised a minimum of 25 mm above floor level.
Free air entry inlet to be located in external wall to give a free ventilation rate of at least 50% of the throat opening area.
Pipe insulation - all central heating and hot water supply pipes in unheated spaces to be protected with insulation to comply to BS 5422 / BS 5618, Section 2 of BS 6700 and Bldg Regs Part L.
Boiler control - electric programmer positioned near boiler.

SAP RATING = 86 (BASED ON DESIGN SPECIFICATION)

Client
MR & MRS G.R. LUNN

Project:
PROPOSED HOUSE AND GARAGE ON PLOT 2 OFF PARK LANE DONNINGTON SPALDING LINCS

Drawing No TS · HLD · 00·1·2