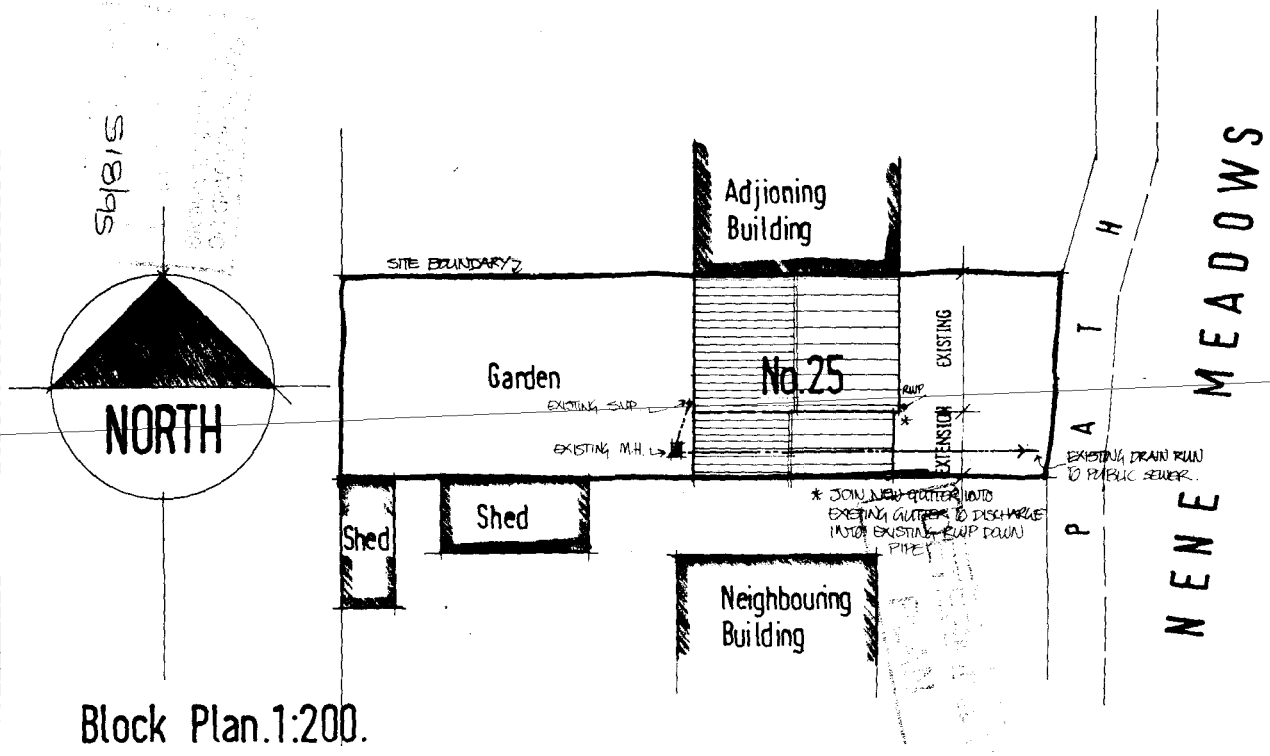


Block Plan.1:200.

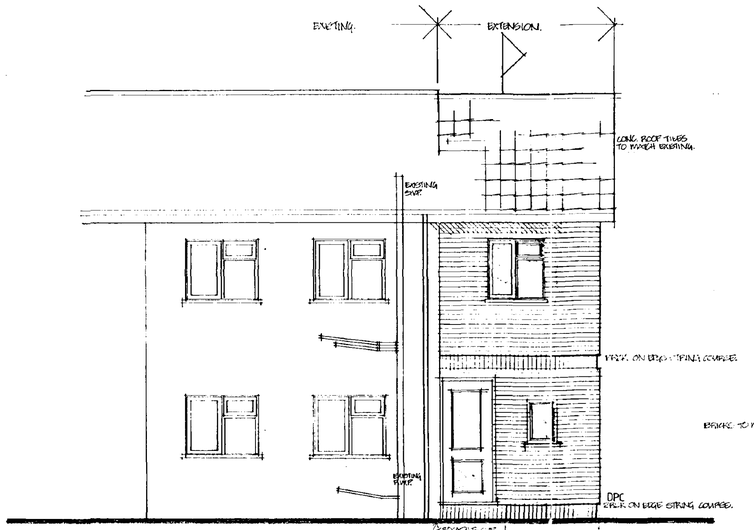
MR C LAWENCE

Two Storey Extension to 25 Nene Meadows, Sutton Bridge, Spalding, Lincs.

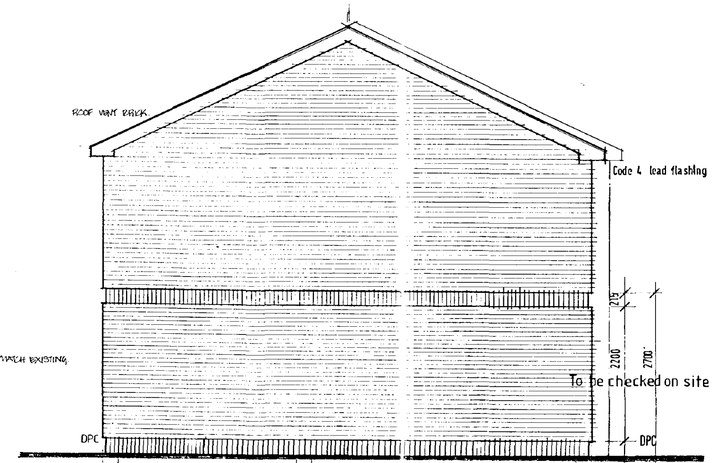
J HARRALL (Dip-Arch)
2 Post Office Lane,
Wisbech, Cambs.
PE13 1HG. Tel:(0945)476800.

22/06/95

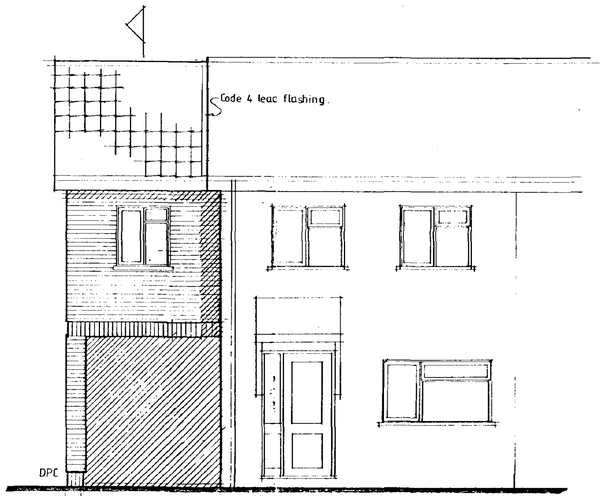
186/03



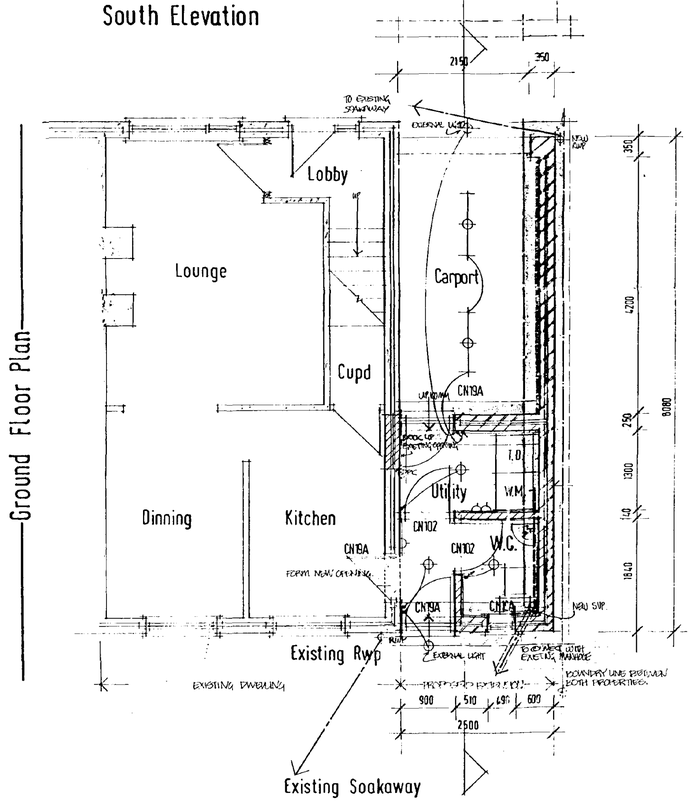
South Elevation



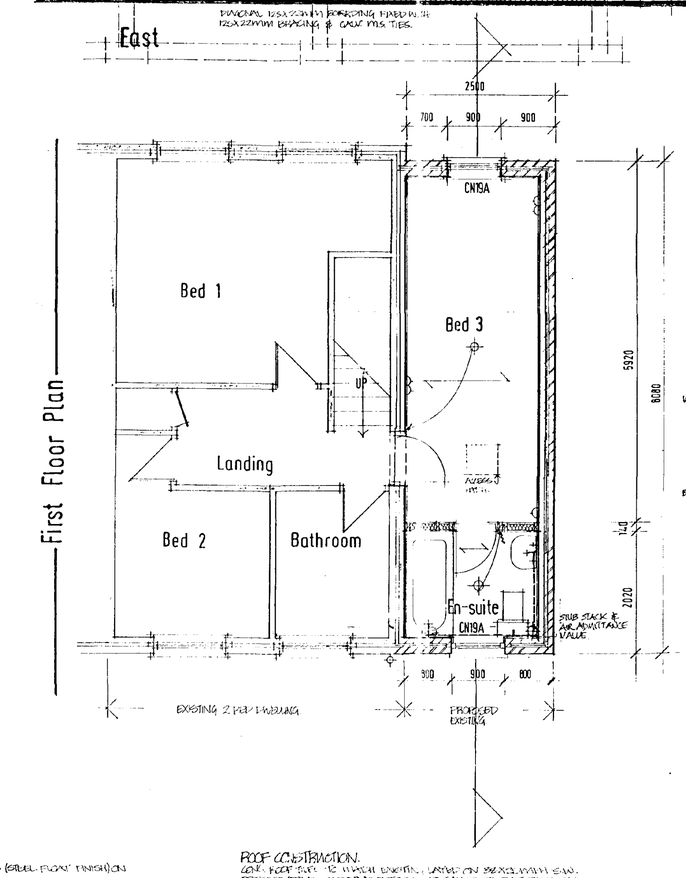
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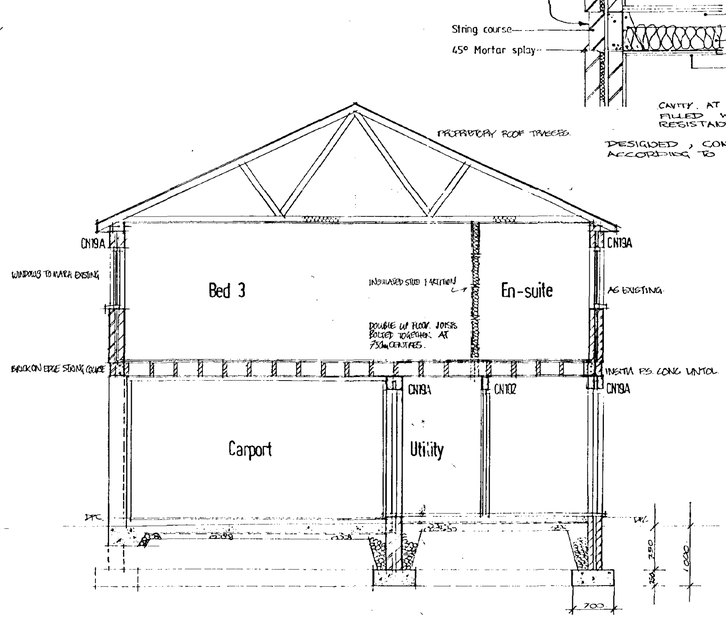
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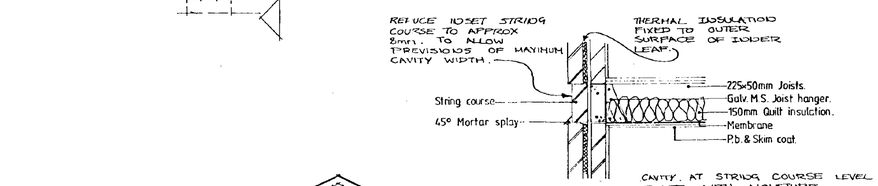
Ground Floor Plan



First Floor Plan



Ground Floor Plan



CAVITY AT STRING COURSE LEVEL FILLED WITH MOISTURE RESISTANT CAVITY FILL.

DESIGNED, CONSTRUCTED AND BRACED ACCORDING TO BS 5268 pt 3. 1985.

FOUNDATIONS STRIP FOUNDATIONS.
EXCAVATE TO A DEPTH OF 900mm (MIN) BELOW GROUND LEVEL X 700mm WIDE.
X 250mm DEEP CONC FOUNDATION.
FILL SPACE UNDER CONCRETE TO A DEPTH OF 250mm.
ALL FOUNDATIONS TO BE INSPECTED & AGREED BY BUILDING CONTROL.

EXTERNAL WALLS
100mm FACING BRICKS TO BS 3921:1974
50mm CAVITY.
100mm HEMELITE 3.5W/MM2 STANDARD LOADBEARING INSULATION BLOCKS TO BS 6073: 1981.
CLOSE CAVITY WITH BRICK AT HEAD OF WALL & ALL OPENINGS.
12mm TWO COAT PLASTER.
30mm PHEP BOARD INSULATION.
U VALUE 0.6 W/M²K.

GROUND FLOOR CONSTRUCTION
100mm WELL CONSOLIDATED HARDCORE WITH 25mm SAND BLINDING.
250 GAUGE POLYTHENE DPM TURNED UP WALL FACE & LAPPED WITH DPC IN WALL BY 100mm.
100mm CONC SLAB WITH 2 COATS OF LIQUID DPM. TO LAP WITH DPC IN WALL
50mm 3:1 SAND/CEMENT FLOOR SCREED

GARAGE FLOOR CONSTRUCTION.
100mm GRADE C20P CONC FLOOR SLABS (SELF FLOW FINISH) ON 1000 GAUGE POLYTHENE DPM.
FORM 300×450mm DP AT BASE OF FLOOR SLABS AT GARAGE DOOR OPENING.
LAY FLOOR WITH 25mm FALL FROM BACK TO FRONT.
100mm WALL CONSOLIDATED HARDCORE WITH 25mm SAND BLINDING.

FIRST FLOOR CONSTRUCTION.
22mm T&G CHIPBOARD IN TWO LAYERS WITH STAGGERED JOINTS.
225×50mm FLOOR JOISTS @ 400mm C/C.
150mm QUILT INSULATION
VAPOUR BARRIER.
2 LAYERS OF 12.5mm P.B. & SKIM COAT.
DOUBLE UP FLOOR JOISTS TO UNDERSIDE OF STUD PARTITIONS WHERE RUNNING PARALLEL
BRACE IN 50×50mm GALV M.S. ANCHOR STRAPS TO END OF JOISTS & ACROSS 2ND. JOISTS WHERE RUNNING PARALLEL TO WALL.
BUILD IN SOLID NOGGINS TO M.I. UNSUPPORTED EDGES OF P.B

ROOF CONSTRUCTION.
CONC. ROOF TILES TO MATCH EXISTING LAYED ON 38×25mm SAW. PRESERVATIVE TREATED BATTENS AT GAUGE TO SUIT TILES ON ROOFING FELT.
PROPRIETARY ROOF TRUSSES @ 1.00mm C/C. DETAILS & CALCS SUBMITTED BY MANUFACTURER.
100×50mm WIRED BRACING FIXED WITH 2 NAILS TO EACH TRUSS.
PROVIDE TRUSS CLIPS.
30×5mm GALV MS ANCHOR STRAPS @ 1.2M C/C FIX TO 2NO. TRUSSES. INCLUDE FOR SOLID NOGGINGS BETWEEN TIMBS & WALL.
100mm TOWN TIGHT TO STRAPS TO INNER LEAF.
30×25mm GALV M.S. HOLDING DOWN STRAPS @ 2.0M C/C. FIX TO FOOT OF RAFTERS. ADDITIONAL STRAPS TO EACH SIDE OF WINDOW OPENINGS.
25×225mm SW FACIA BOARD.
200×6mm WIDE PVC/UPVC SOFFIT WITH EQUIVALENT 10mm CONTINUOUS VENT GAP WITH INSECT MESH
PROVIDE TILING FILLET TO FOOT OF RAFTERS & FIX PROPRIETORY ROOF SPACE VENTILATOR.
OVERLAY CEILING WITH 100mm G. WT INSULATION, U VALUE 0.20 W/M²K.
FIX 12.7mm P.B. TO UNDERSIDES OF CEILING JOISTS COMPLETE WITH NOGGING TO ALL UNSUPPORTED EDGES, SKIM COAT FINISH.

STUD PARTITIONS.
LOADBEARING STUD PARTITIONS TO FIRST FLOOR WITH 100×50mm STUDS, 100×50mm HEAD & SOLE PLATE.
NOGGINS TO ALL UNSUPPORTED EDGES OF P.B
12.5mm P.B. & SKIM COAT.

LINTOLS.
ALL STEEL LINTOLS TO BE MANUFACTURED BY CATNIC COMPONENTS LTD.
WEEP HOLES OVER ALL OPENINGS.
100×65mm P.S. CONC. LINTOL INWARD 150mm PROBE THROUGH WALL
142×22.5mm R.S. LINTOL WITH (INSITU) 2×125mm ROBS REINFORCEMENT. 80mm (MIN) SMP BEARING.

WALL TIES
BUILD IN STAINLESS STEEL WALL TIES TO BS 1243 PT 2: 1978 @ 300mm HORIZONTAL, 450mm VERTICAL CENTRES & STAGGERED WITH ADDITIONAL WALL TIES @ EVERY BLOCK COURSE AT REVEALS OF ALL OPENINGS & WHERE CAVITY IS VERTICALLY CLOSED.

DPC
PROVIDE VERTICAL DPC TO PERIMETER OF ALL WALLS/OPENINGS (STAPLED TO WINDOW FRAMES) & ALL CAVITY CLOSURES.

NO DRAINS AFFECTED BY PROPOSAL.

186/01

H	17	1/2 Hr fire door and frame (self closing) to be placed between utility and garage.
G	12	Roof ventilation equivalent to cont 10mm air gap.
F	11	Roof restraint straps to be fixed accross 3 trusses at verge and ceiling tie line.
E	10	Roof trusses to designed and braced to BS 5268 Part 3. 1985.
D	9	All new windows to be double glazed.
C	4	See s.e. notes.
B	3	1000 Gauge polythene D.P.M.
A	2	30mm Rockwool parhat fill ridgid insulation board.
		B.R. AMENDMENTS.

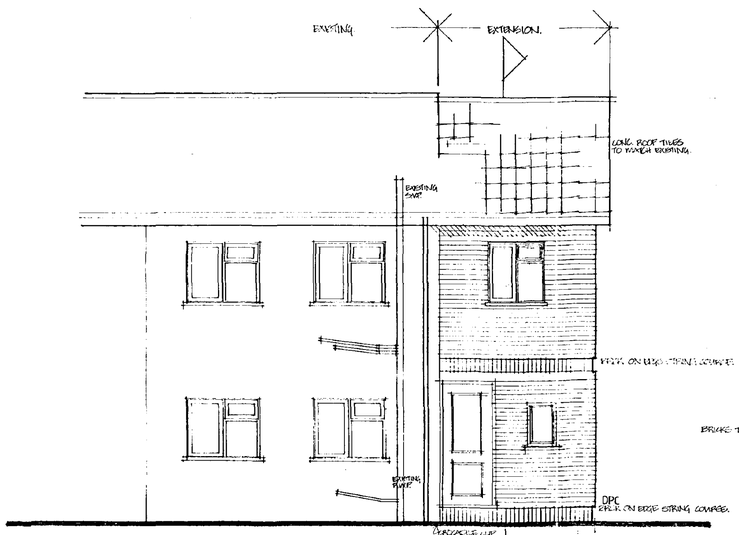
MR C LAWENCE, NENE MEADOWS
SUTTON BRIDGE SPALDING.

Proposed 2 storey extension & Carport

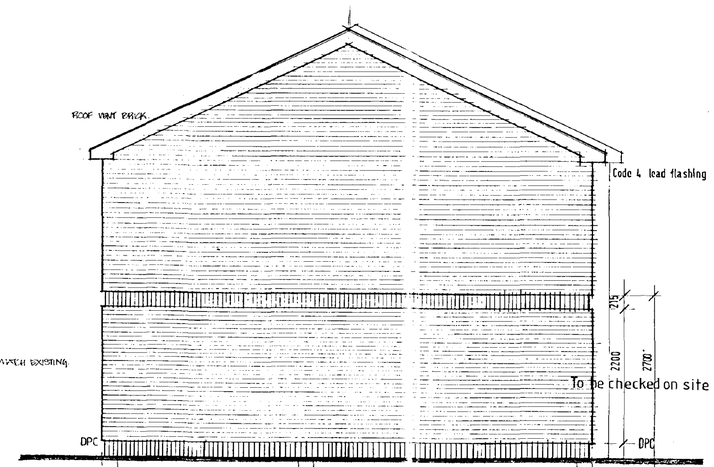
PLANS ELEVATIONS & SECTION

May 1989 SMO 1:50

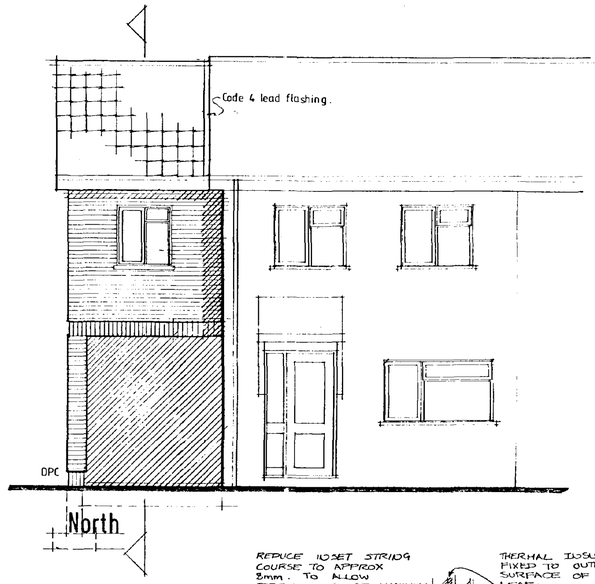
AMENDED JULY 1989.
AMENDED AUGUST 89.
AMENDED APRIL 1995



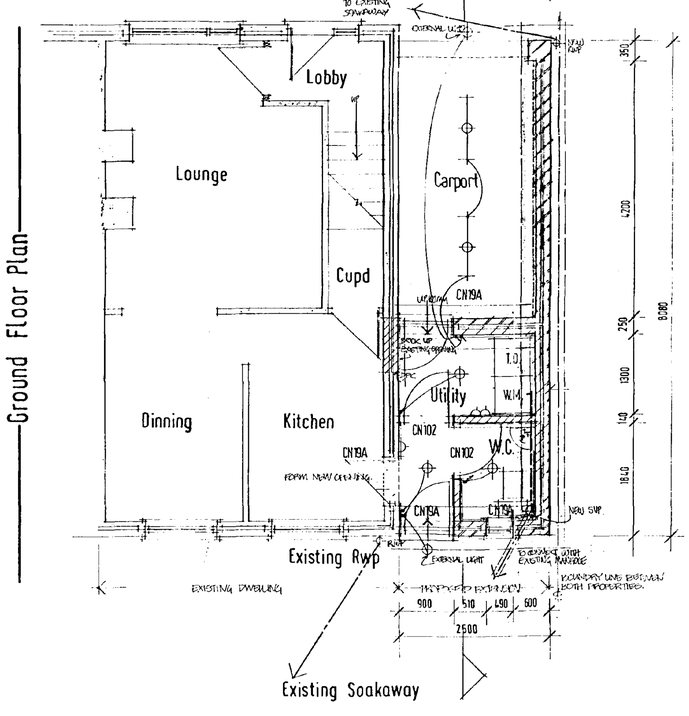
South Elevation



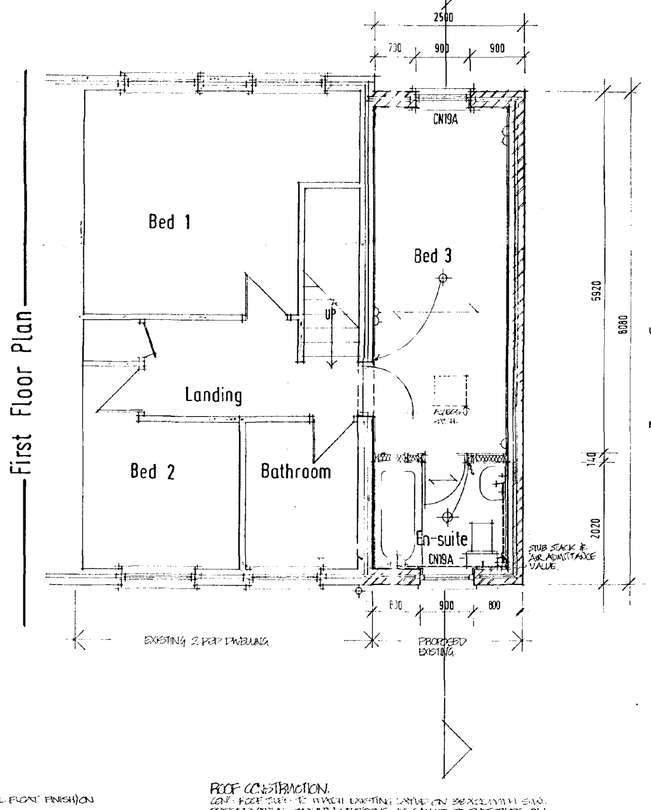
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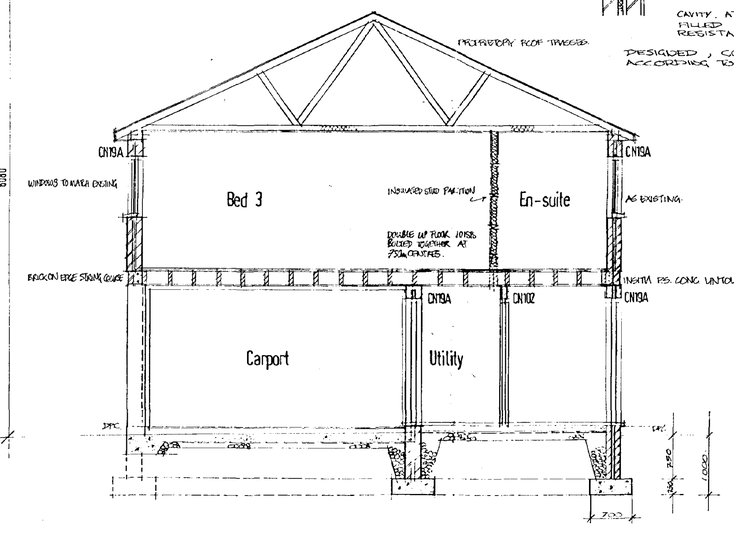
North



Ground Floor Plan



First Floor Plan



FOUNDATIONS STRIP FOUNDATIONS.
EXCAVATE TO A DEPTH OF 1000mm (MIN) BELOW GROUND LEVEL X 750mm WIDE.
X 250mm DEEP CONC. FOUNDATION
FOUR COURSES C20P CONCRETE TO A DEPTH OF 250mm.
ALL FOUNDATIONS TO BE INSPECTED & AGREED BY BUILDING CONTROL.

EXTERNAL WALLS
100mm FACING BRICKS TO BS.3921:1974
65mm CAVITY.
100mm HEMELITE 3.5W/MM² STANDARD LOADBEARING INSULATION
BLOCKS TO BS 6073: 1981.
CLOSE CAVITY WITH BLOCK AT HEAD OF WALL & ALL OPENINGS.
13mm TWO COAT PLASTER.
50mm RIGID BOARD INSULATION.
U-VALUE 0.6 W/M²K.

GROUND FLOOR CONSTRUCTION.
100mm WELL CONSOLIDATED HARDCORE WITH 25mm SAND BLINDING.
150mm RIGID POLYTHENE DPM TURNED UP WALL FACE & LAPPED WITH DPC IN WALL BY 100mm.
100mm CONC SLAB WITH 2 COATS OF LIQUID DPM TO LAP WITH DPC IN WALL
50mm 3:1 SAND/CEMENT FLOOR SCREED

GARAGE FLOOR CONSTRUCTION.
100mm ARGE C20P CONC. FLOOR SLABS (LEVEL FLOAT FINISH) ON 250mm CONSOLIDATED HARDCORE WITH SAND BLINDING.
150mm RIGID POLYTHENE DPM.
FROM 300X150mm DEEP STRIP FOOTINGS AT EDGES OF FLOOR SLAB AT GARAGE DOOR OPENING.
DAY FLOOR WITH 25mm FALL FROM BACK TO FRONT.
100mm WELL CONSOLIDATED HARDCORE WITH 25mm SAND BLINDING.

FIRST FLOOR CONSTRUCTION.
22mm T&G CHIPBOARD IN TWO LAYERS WITH STAGGERED JOINTS.
225X50mm FLOOR JOISTS @ 400mm C/C.
100mm QUILT INSULATION
VAPOUR BARRIER.
2 LAYERS OF 12.5mm P.B & SKIM COAT.
DOUBLE UP FLOOR JOISTS TO UNDERSIDE OF STUD PARTITIONS WHERES RUNNING PARALLEL
BUILD IN 30X5mm GALV M.S ANCHOR STRAPS TO END OF JOISTS & ACROSS END JOISTS WHERE RUNNING PARALLEL TO WALL.
BUILD IN SOLID NOGGING TO ALL UNSUPPORTED EDGES OF P.B.

ROOF CONSTRUCTION.
GAL ROOF TILES TO MATCH EXISTING LAYING ON 38X22mm SAWN PRESERVATIVE TREATED BATTENS AT GAUGE TO SUIT TILES ON ROOFING FELT.
PROVIDE AND FIX ROOF TRUSSES @ 600mm C/C. DETAILS & CALCS. DURING PLANNING/BUILDING REGULATIONS & FIXING DETAILS TO BE SUBMITTED TO BUILDING CONTROL.
FIX TRUSSES TO EACH OTHER WITH 30X5mm GALV MS ANCHOR STRAPS @ 1.8m C/C. FIX TO WALL WITH 2 No. TIMBERS. INCLUDE FOR SOLID NOGGING BETWEEN TIMBERS & WALL.
BOLT DOWN TIMBERS TO STRIPS TO INNER LEAF.
30X2.5mm GALV M.S HOLDING DOWN STRAPS @ 2.0m C/C. FIX TO FOOT OF RAFTERS. ADDITIONAL STRAPS TO EACH SIDE OF WINDOW OPENINGS.
200X22mm SAW FACIA BOARD.
200X18mm WBP PLYWOOD SOFFIT WITH EQUIVALENT 100mm CONTINUOUS AIR GAP WITH INSECT MESH.
PROVIDE TILING FILLET TO FOOT OF RAFTERS & FIX PROPRIETORY ROOF EAVES VENTILATOR.
OVERLAY CEILING WITH 100mm GW/MF INSULATION, U-VALUE 0.23W/M²K.
FIX 12.7mm P.B TO UNDERSIDE OF CEILING JOISTS COMPLETE WITH NOGGING TO ALL UNSUPPORTED EDGES, SKIM COAT FINISH.

STUD PARTITIONS.
CONSTRUCT STUD PARTITIONS TO FIRST FLOOR WITH 100X50mm STUDS, 100X50mm HEAD & SOLE PLATE.
NOGGINGS TO ALL UNSUPPORTED EDGES OF P.B.
12.5mm P.B. & SKIM COAT.

LINTOLS.
ALL STEEL LINTOLS TO BE MANUFACTURED BY CATNIC COMPONENTS LTD.
WEEP HOLES OVER ALL OPENINGS.
100X65mm P.S. CONC. LINTOL WHERE 110mm BRICKS THROUGH WALL.
142X225mm R.C. LINTOL WITH (INSITU) 2 X 12mm BOBS REINFORCEMENT. 80mm (MIN) END BEARING.

WALL TIES
BUILD IN STAINLESS STEEL WALL TIES TO BS 1449 PT 1: 1983 @ 300mm HORIZONTAL, 450mm VERTICAL CENTRES & STAGGERED WITH ADDITIONAL WALL TIES @ EVERY BRICK COURSE AT TURNOVER OF ALL OPENINGS & WHERE CAVITY IS VERTICALLY CLOSED.

DPC
PROVIDE VERTICAL DPC TO REVEALS OF ALL WALLS/OPENINGS (STARTED TO WINDOW FRAMES) & ALL CAVITY CLOSURES.

NO DRAINS AFFECTED BY PROPOSAL.

136/01

H	17	1/2 Hr. fire door and frame (self closing) to be placed between utility and garage.
G	12	Roof ventilation equivalent to cont 10mm air gap
F	11	Roof restraint straps to be fixed accross 3 trusses at verge and ceiling tie line.
E	10	Roof trusses to designed and braced to BS 5268: Part 3, 1985.
D	9	All new windows to be double glazed
C	4	See s.e. notes.
B	3	1000 Gauge polythene D.P.M.
A	2	30mm Rockwool partial fill rigidd insulation board.
		B.R. AMENDMENTS.

MR C LAWENCE, NENE MEADOWS
SUTTON BRIDGE SPALDING.

Proposed 2 storey extension & Carport

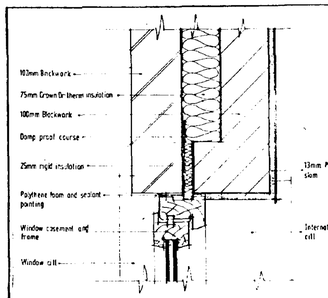
PLANS ELEVATIONS & SECTION

May 1989 SMD 1:50

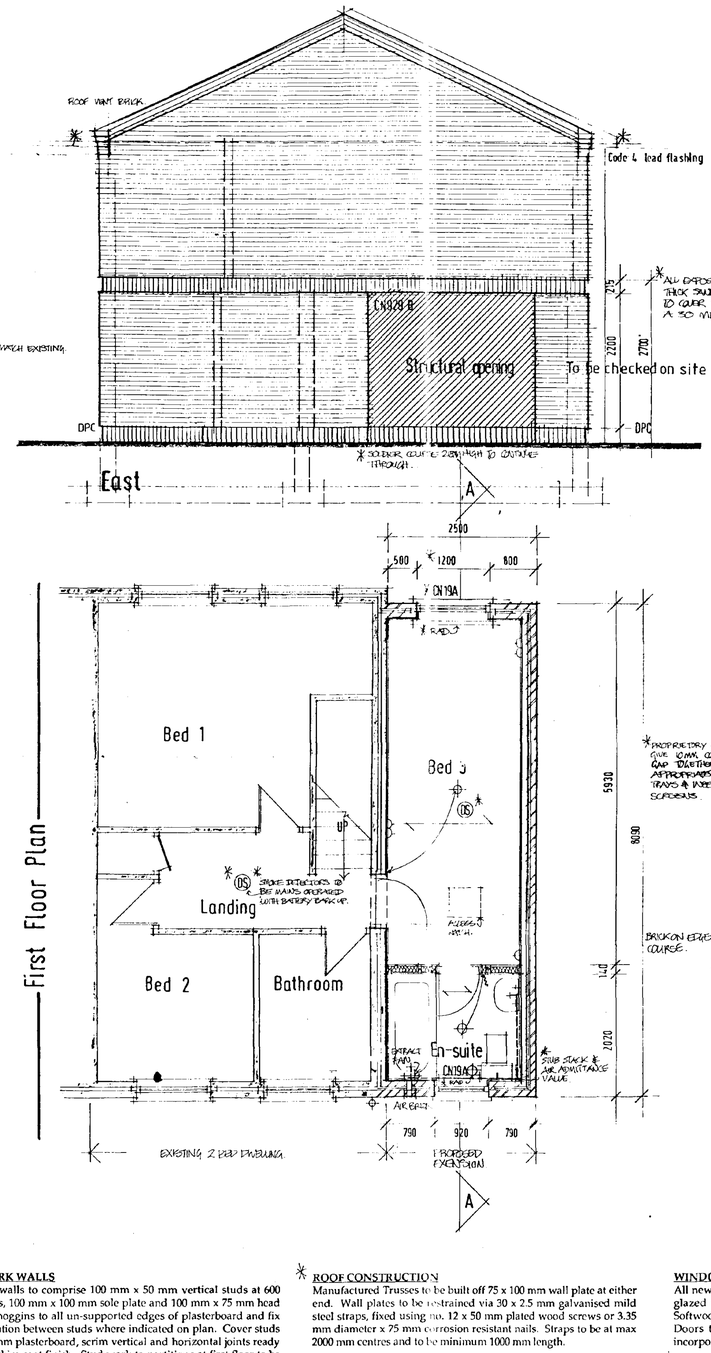
AMENDED JULY 1989

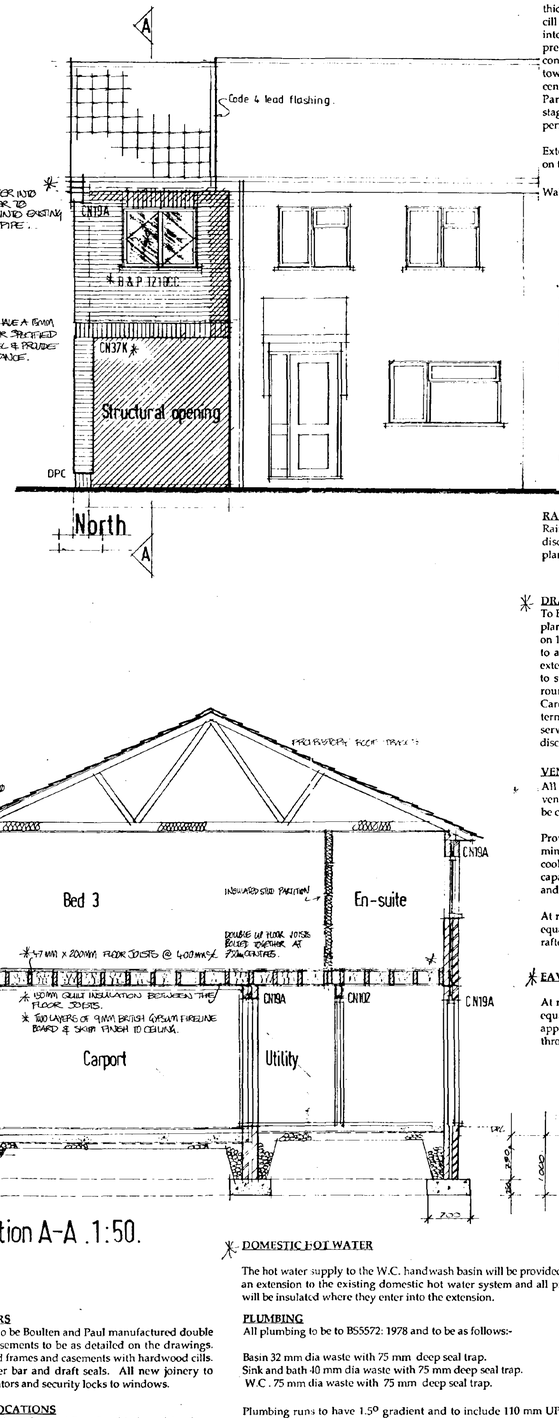
AMENDED AUGUST 89.

AMENDED APRIL 1990



Window/Door Jamb Detail.





EXTERNAL WALLS (Cavity Construction)
External walls to comprise 275 mm overall thickness, 100 mm thick facing brickwork outer leaf to BS 5921: 1974. 75 mm cavity fully filled with Crown Dritherm or equal insulation and 100 mm thick high insulation blockwork inner leaf to BS 6073: 1981. Insert 25 mm thickness rigid insulation board into the cavity closure at the window cill and jamb details as indicated on the drawings. Plaster finish to internal surface. Both leaves of masonry below dpc to have been previously built. Between both leaves, fill the cavity with lean mix concrete up to minimum 150 mm below dpc level and slope off towards external leaf. Build in 'perpend' weep holes at 450 mm centres. Build into new cavity walls stainless steel wall ties to BS 1449: Part 2: 1983 at 900 mm horizontal, 450 mm vertical centres in staggered formation, with additional wall ties at every block course at perimeter of all openings and where the cavity is vertically closed.

Externally include all soldier courses and string courses as indicated on the elevations.

Wall construction U-Value = 0.34 W/m²K.

External Cavity Wall U-Valve

	m	Thermal conductivity W/mK	Thermal resistance m² K/W
Wall surface			0.06
Brick outer leaf	0.1	0.84	0.12
Thermal insulation (Cavity fill)	0.075	0.037	2.03
Block inner leaf	0.1	0.17	0.59
Dense plaster	0.015	0.50	0.03
Inner surface			0.12
			2.95

U-Value = 1 / Total Resistance = 0.34W/m²K

RAINWATER GOODS
Rainwater goods to comprise 110 mm half round PVCU guttering discharging into 65 mm PVCU down pipes in positions indicated on plan.

DRAINAGE
To BS8301, lay PVCU drain pipes, sizes and gradients as indicated on plan. All PVCU pipes and fittings to comply with BS4660 to be laid on 100 mm pea gravel bed. Back fill drain excavation with pea gravel to a level of 100 mm above the pipe. Where pipes pass through external walls provide 100 mm x 65 mm pre-stressed concrete lintels to support walls above. Provide minimum 50 mm clearance all round the pipe and mask the opening with rigid sheet material. Carefully break into existing manhole with new drainage run and terminate in the existing manhole with new backdrop. Drain runs serving gullies to have a minimum fall of 1:40. Drain runs to discharge into the existing sewer at the front of the building.

VENTILATION
All windows and doors to incorporate min 4000 mm² trickle ventilators for background ventilation. Background ventilation should be controllable, secure and located so as not to cause a draught.

Provide a mechanical extract fan to the kitchen capable of extracting min 60 litres per second or alternatively min 30 litres per second in a cooker hood. Also provide a mechanical extract fan to the bathroom capable of extracting 15 litres per second with a 15 minute over-run and operated intermittently.

At roof level provide proprietary eaves ventilator to give ventilation equal to min 10 mm continuous air gap together with all appropriate rafter trays and insect screen's to ensure cross ventilation.

EAVES VENTILATION
At roof level provide proprietory eaves ventilator to give ventilation equal to a minimum of 10 mm continuous air gap together with all appropriate rafter trays and insect screens to ensure cross ventilation through the soffit and into the eaves.

Ref: 0518/95

186/01/B

H	17	1/2 Hr. fire door and frame (self closing) to be placed between utility and garage
G	12	Roof ventilation equivalent to cont 10mm air gap
F	11	Roof restraint straps to be fixed accross 3 trusses at verge and ceiling tie line.
E	10	Roof trusses to designed and braced to BS 5268 Part 3, 1985
D	9	All new windows to be double glazed
C	4	See s.e. notes.
B	3	1000 Gauge polythene D.P.M.
A	2	30mm Rockwool partial fill ridgid insulation board

B.R. AMENDMENTS

AMENDED PLAN

Ref.

MR C LAWENCE, NENE MEADOWS
SUTTON BRIDGE SPALDING.

Proposed 2 storey extension & Carport

PLANS ELEVATIONS & SECTION

May 1989 SMD 1:50

AMENDED JULY 1989
AMENDED AUGUST 89.
AMENDED APRIL 1995
AMENDED AUGUST 95.

GROUND FLOOR CONSTRUCTION
Lay minimum 150 mm blinded hardcore in 150 mm maximum well consolidated and compacted layers. On blinding lay 1200 gauge dpm turning up at all wall faces to lap with dpc. Pour 150 mm depth C20P concrete onto dpm to form oversite slab. Paint slab with three coats Synthaprufe or equal water based liquid dpm; coverage rates and installations to be as manufacturers recommendations, ensuring that liquid dpm bonds with polythene dpm to form an impervious layer. Lay 25 mm 'Floormate' extruded polystyrene rigid insulation board manufactured by Dow Chemicals Limited on synthaprufe water based liquid dpm incorporating a vertical perimeter strip, with 500 gauge polythene above to fully envelope insulation. Floor finish to comprise 65 mm (3:1) sand and cement screed reinforced with galvanised wire mesh.

Floor construction U-Value = 0.45 W/m²K.

GARAGE FLOOR CONSTRUCTION
100 mm grade C20P concrete floor slab, (steel float finish), on 1000 gauge polythene DPM.
Form 300 x 450 mm toe at edge of floor slab at garage door opening.
Lay floor with 25 mm fall from back to front.
100mm well consolidated hardcore with 25 mm sand blinding.

SMOKE DETECTORS
Provide smoke detectors indicated on plan. Smoke detectors are to be mains operated with battery backup conforming to BS5446.

DAMP PROOF COURSE (Cavity Wall)
Dpc to be installed to BS5628: Part 3: 1985 and in full compliance with manufacturer's recommendations and CP102. Dpc to be positioned min 150 mm above ground level in both leaves of external walls. Dpc in external leaf to project min 5 mm externally, in accordance with manufacturer's recommendations. Dpc in internal leaf to lap min 100 mm with dpm on floor slab. Provide vertical dpc to perimeter of all openings (stapled to all windows/door frames) and to all cavity closures. Provide additional dpc above all external lintels sloping outwards and below all internal blockwork walls built off floor slab.

FIRST FLOOR CONSTRUCTION
Floor construction to comprise 22 mm tongue and groove chipboard on construction grade softwood floor joists, (sizes as on the drawing), at 400 mm centres. Build in 30 x 5 mm galvanised mild steel anchor straps to ends of joists and across 3 No. joists where running parallel with wall. Straps to be placed at 1800 mm centres, (maximum). Straps to have 150 mm down turn hooked over inner leaf of cavity wall and to be fixed to joists using No. 12 x 50 mm Sheradized wood screws. Solid noggins to be provided between joists and wall and between each joist at strap positions. Depth of noggins to be at least half of joist depth. Line underside of floor structure with 12.7 mm plasterboard complete with noggings to all unsupported edges. Ceilings to receive skim coat finish.

STUDWORK WALLS
Studwork walls to comprise 100 mm x 50 mm vertical studs at 600 mm centres, 100 mm x 100 mm sole plate and 100 mm x 75 mm head plate. fix noggins to all un-supported edges of plasterboard and fix quilt insulation between studs where indicated on plan. Cover studs with 12.7 mm plasterboard, scrim vertical and horizontal joints ready to receive skim coat finish. Stud work to partitions at first floor to be supported by doubled up floor joists where partitions run parallel with floor joists.

LINTELS
All lintels specified to be manufactured by Catnic and to be installed in strict compliance with manufacturers instructions.

Minimum end bearing of 150 mm both ends. All lintels to include proprietory insulation and to have weep holes included in perpendicular mortar joints above all external windows and doors.

PLASTERWORK
All plasterwork to comprise 11 mm thickness sand/cement render, (applied in two coats), finished with 2 mm skim coat finish. Include for all appropriate galvanised steel corner meshes, angle beads, stops etc.

At wallplate level, build into plasterwork stainless steel expanded metal lath fixed to wall plate and blockwork.

ROOF CONSTRUCTION
Manufactured Trusses to be built off 75 x 100 mm wall plate at either end. Wall plates to be restrained via 30 x 2.5 mm galvanised mild steel straps, fixed using no. 12 x 50 mm plated wood screws or 3.35 mm diameter x 75 mm corrosion resistant nails. Straps to be at max 2000 mm centres and to be minimum 1000 mm length.

Install 30 x 5 mm galvanised mild steel restraining straps along the gable end at 1800 mm maximum centres fixed to minimum 3 No. rafters and turned down 150 mm over an uncut block in the blockwork inner leaf. Provide solid noggins between rafters and rafter and wall, rebating straps into rafters.

LOFT HATCH
Form loft hatch 600 mm x 900 mm to roof space in position indicated on floor plans. Build-in frame bearers 100 mm x 47 mm with door stop to inner edge. Place 6 mm WBP plywood hatch with 50 mm Drytherm insulation glued to topside.

CARPORT CEILING
Carport ceiling is to be constructed using two layers of 9 mm thick British Gypsum Fireline board fixed with staggered centres and overlapping joints. Fireline board is to receive a 5 mm coat of plaster finish.

WINDOWS AND DOORS
All new external joinery to be Boulten and Paul manufactured double glazed units, opening casements to be as detailed on the drawings. Softwood Vac-Vac treated frames and casements with hardwood cills. Doors to include weather bar and draft seals. All new joinery to incorporate trickle ventilators and security locks to windows.

CRITICAL GLAZING LOCATIONS
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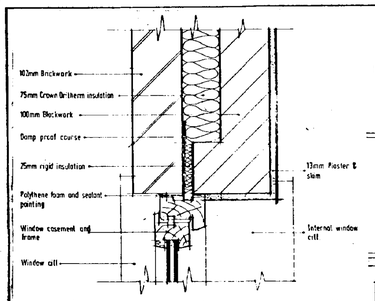
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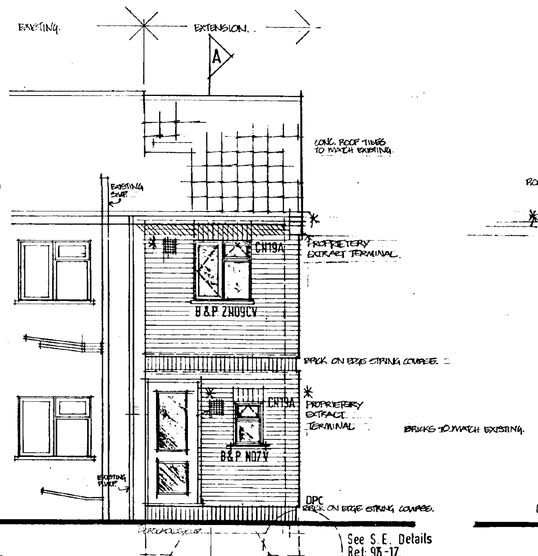
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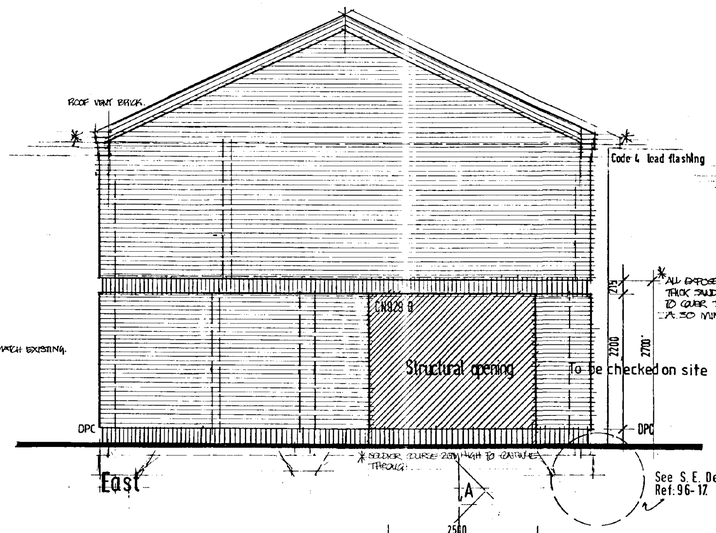
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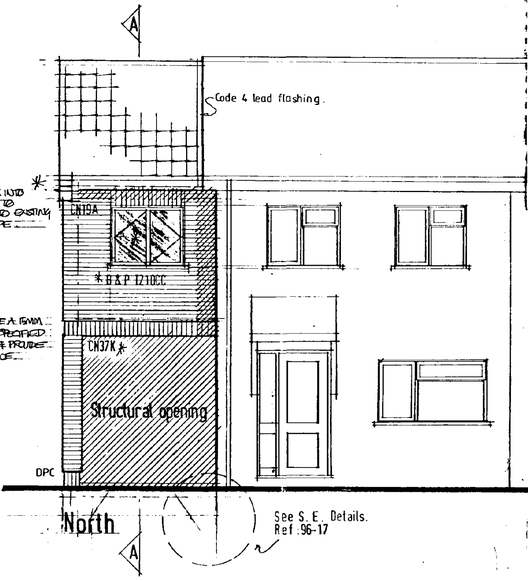
Window/Door Jamb Detail.



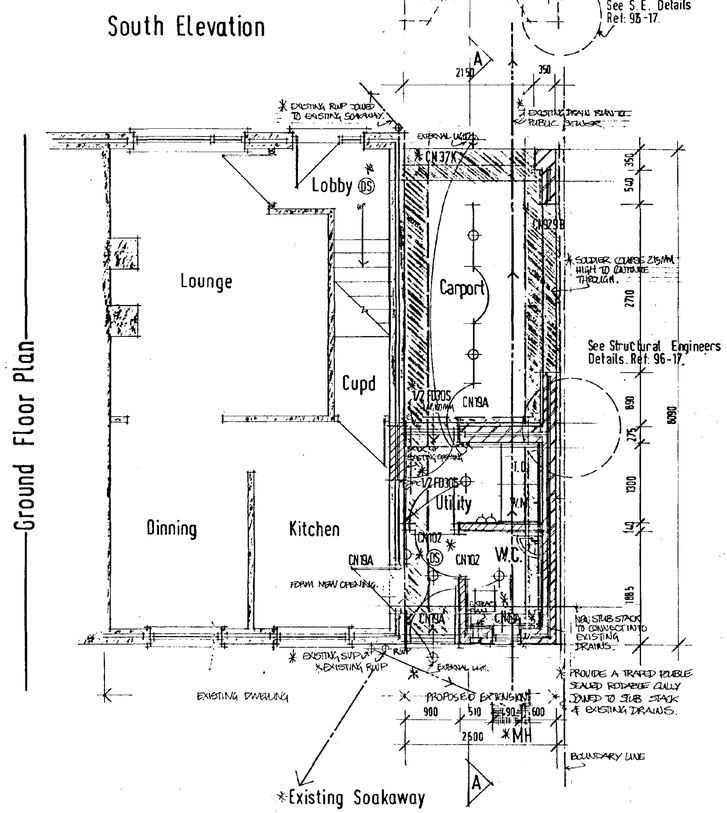
South Elevation



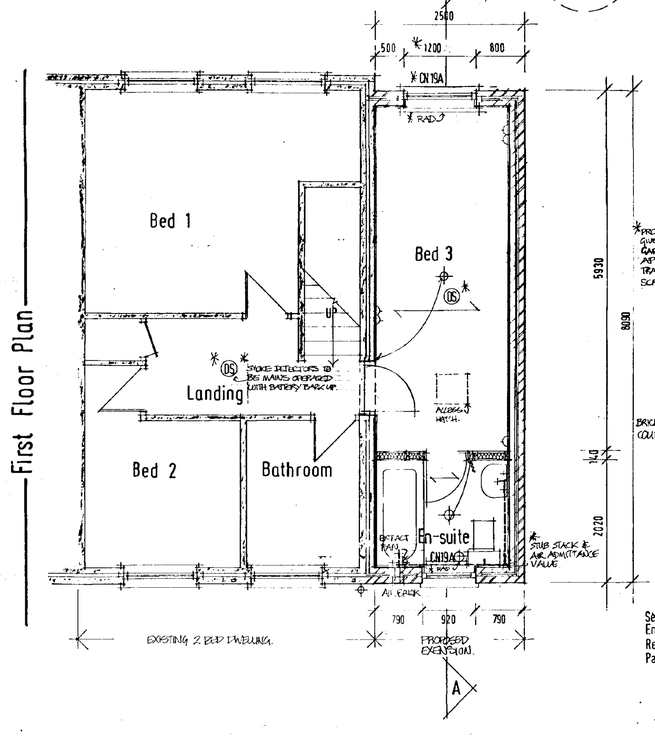
East



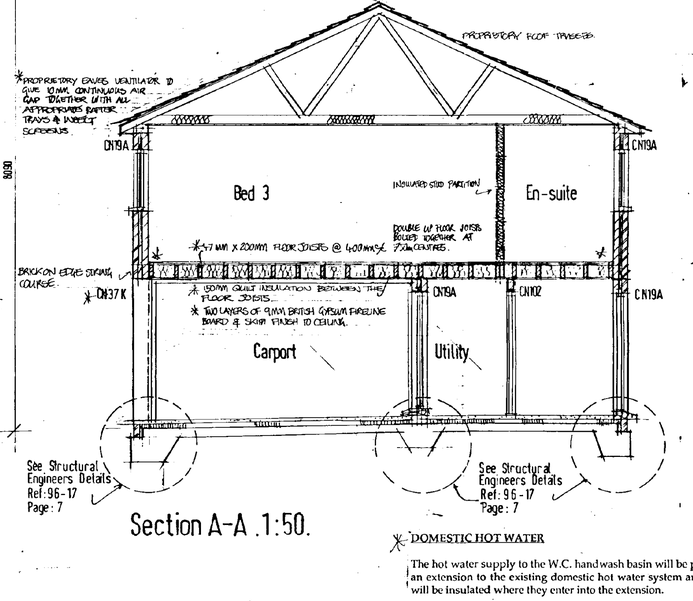
North



Ground Floor Plan



First Floor Plan



Section A-A .1:50.

EXTERNAL WALLS (Cavity Construction)
External walls to comprise 275 mm overall thickness, 100 mm thick facing brickwork outer leaf to BS 3921: 1974. 75 mm cavity fully filled with Crown Dritherm or equal insulation and 100 mm thick high insulation blockwork inner leaf to BS 6073: 1981. Insert 25 mm thickness rigid insulation board into the cavity closure at the window cill and jamb details as indicated on the drawings. Plaster finish to internal surface. Both leaves of masonry below dpc to have been previously built. Between both leaves, fill the cavity with lean mix concrete up to minimum 150 mm below dpc level and slope off towards external leaf. Build in 'perpend' weep holes at 450 mm centres. Build into new cavity walls stainless steel wall ties to BS 1449: Part 2: 1983 at 900 mm horizontal, 450 mm vertical centres in staggered formation, with additional wall ties at every block course at perimeter of all openings and where the cavity is vertically closed.

Externally include all soldier courses and string courses as indicated on the elevations.

Wall construction U-Value = 0.34 W/m^{2}K.

External Cavity Wall U-Valve

	m	Thermal conductivity W/mK	Thermal resistance m^2 K/W
Wall surface			0.06
Brick outer leaf	0.1	0.84	0.12
Thermal insulation (Cavity fill)	0.075	0.037	2.03
Block inner leaf	0.1	0.17	0.59
Dense plaster	0.015	0.50	0.03
Inner surface			0.12
			2.95

U-Value = 1 / Total Resistance = 0.34W/m^{2}K

RAINWATER GOODS
Rainwater goods to comprise 110 mm half round PVCU guttering discharging into 65 mm PVCU down pipes in positions indicated on plan.

DRAINAGE
To BS8301, lay PVCU drain pipes, sizes and gradients as indicated on plan. All PVCU pipes and fittings to comply with BS4660 to be laid on 100 mm pea gravel bed. Back fill drain excavation with pea gravel to a level of 100 mm above the pipe. Where pipes pass through external walls provide 100 mm x 65 mm pre-stressed concrete lintels to support walls above. Provide minimum 50 mm clearance all round the pipe and mask the opening with rigid sheet material. Carefully break into existing manhole with new drainage run and terminate in the existing manhole with new backdrop. Drain runs serving gullies to have a minimum fall of 1:40. Drain runs to discharge into the existing sewer at the front of the building.

VENTILATION
All windows and doors to incorporate min 4000 mm^2 trickle ventilators for background ventilation. Background ventilation should be controllable, secure and located so as not to cause a draught.

Provide a mechanical extract fan to the kitchen capable of extracting min 60 litres per second or alternatively min 30 litres per second in a cooker hood. Also provide a mechanical extract fan to the bathroom capable of extracting 15 litres per second with a 15 minute over-run and operated intermittently.

At roof level provide proprietary eaves ventilator to give ventilation equal to min 10 mm continuous air gap together with all appropriate rafter trays and insect screen's to ensure cross ventilation.

EAVES VENTILATION

At roof level provide proprietory eaves ventilator to give ventilation equal to a minimum of 10 mm continuous air gap together with all appropriate rafter trays and insect screens to ensure cross ventilation through the soffit and into the eaves.

GROUND FLOOR CONSTRUCTION
Lay minimum 150 mm blinded hardcore in 150 mm maximum well consolidated and compacted layers. On blinding lay 1200 gauge dpm turning up at all wall faces to lap with dpc. Pour 150 mm depth C20P concrete onto dpm to form oversite slab. Paint slab with three coats Synthaprufe or equal water based liquid dpm; coverage rates and installations to be as manufacturers recommendations, ensuring that liquid dpm bonds with polythene dpm to form an impervious layer. Lay 25 mm 'Floormate' extruded polystyrene rigid insulation board manufactured by Dow Chemicals Limited on synthaprufe water based liquid dpm incorporating a vertical perimeter strip, with 500 gauge polythene above to fully envelope insulation. Floor finish to comprise 65 mm (3:1) sand and cement screed reinforced with galvanised wire mesh.

Floor construction U-Value = 0.45 W/m^{2}K.

GARAGE FLOOR CONSTRUCTION
100 mm grade C20P concrete floor slab, (steel float finish), on 1000 gauge polythene DPM.
Form 300 x 450 mm toe at edge of floor slab at garage door opening.
Lay floor with 25 mm fall from back to front.
100mm well consolidated hardcore with 25 mm sand blinding.

SMOKE DETECTORS

Provide smoke detectors indicated on plan. Smoke detectors are to be mains operated with battery backup conforming to BS5446.

DAMP PROOF COURSE (Cavity Wall)
Dpc to be installed to BS5628: Part 3: 1985 and in full compliance with manufacturer's recommendations and CP102. Dpc to be positioned min 150 mm above ground level in both leaves of external walls. Dpc in external leaf to project min 5 mm externally, in accordance with manufacturer's recommendations. Dpc in internal leaf to lap min 100 mm with dpm on floor slab. Provide vertical dpc to perimeter of all openings (stapled to all windows/door frames) and to all cavity closures. Provide additional dpc above all external lintels sloping outwards and below all internal blockwork walls built off floor slab.

FIRST FLOOR CONSTRUCTION
Floor construction to comprise 22 mm tongue and groove chipboard on construction grade softwood floor joists, (sizes as on the drawing), at 400 mm centres. Build in 30 x 5 mm galvanised mild steel anchor straps to ends of joists and across 3 No. joists where running parallel with wall. Straps to be placed at 1800 mm centres, (maximum). Straps to have 150 mm down turn hooked over inner leaf of cavity wall and to be fixed to joists using No. 12 x 50 mm Sheradized wood screws. Solid noggins to be provided between joists and wall and between each joist at strap positions. Depth of noggins to be at least half of joist depth. Line underside of floor structure with 12.7 mm plasterboard complete with noggings to all unsupported edges. Ceilings to receive skim coat finish.

STUDWORK WALLS
Studwork walls to comprise 100 mm x 50 mm vertical studs at 600 mm centres, 100 mm x 100 mm sole plate and 100 mm x 75 mm head plate. fix noggins to all un-supported edges of plasterboard and fix quilt insulation between studs where indicated on plan. Cover studs with 12.7 mm plasterboard, scrim vertical and horizontal joints ready to receive skim coat finish. Stud work to partitions at first floor to be supported by doubled up floor joists where partitions run parallel with floor joists.

LINTELS
All lintels specified to be manufactured by Catnic and to be installed in strict compliance with manufacturers instructions.

Minimum end bearing of 150 mm both ends. All lintels to include proprietory insulation and to have weep holes included in perpendicular mortar joints above all external windows and doors.

PLASTERWORK
All plasterwork to comprise 11 mm thickness sand/cement render, (applied in two coats), finished with 2 mm skim coat finish. Include for all appropriate galvanised steel corner meshes, angle beads, stops etc.

At wallplate level, build into plasterwork stainless steel expanded metal lath fixed to wall plate and blockwork.

ROOF CONSTRUCTION
Manufactured Trusses to be built off 75 x 100 mm wall plate at either end. Wall plates to be restrained via 30 x 2.5 mm galvanised mild steel straps, fixed using no. 12 x 50 mm plated wood screws or 3.35 mm diameter x 75 mm corrosion resistant nails. Straps to be at max 2000 mm centres and to be minimum 1000 mm length.

Install 30 x 5 mm galvanised mild steel restraining straps along the gable end at 1800 mm maximum centres fixed to minimum 3 No. rafters and turned down 150 mm over an uncut block in the blockwork inner leaf. Provide solid noggins between rafters and rafter and wall, rebating straps into rafters.

LOFT HATCH
Form loft hatch 600 mm x 900 mm to roof space in position indicated on floor plans. Build in frame bearers 100 mm x 47 mm with door stop to inner edge. Place 6 mm WBP plywood hatch with 50 mm Drytherm insulation glued to topside.

CARPORT CEILING

Carport ceiling is to be constructed using two layers of 9 mm thick British Gypsum Fireline board fixed with staggered centres and overlapping joints. Fireline board is to receive a 5 mm coat of plaster finish.

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H	17	1/2 Hr. fire door and frame (self closing) to be placed between utility and garage.
G	12	Roof ventilation equivalent to cont 10mm or gap
F	11	Roof restraint straps to be fixed across 3 trusses at verge and ceiling tie line
E	10	Roof trusses to designed and braced to BS 5268 Part 3 1985.
D	9	All new windows to be double glazed.
C	4	See s.e notes.
B	3	1000 Gauge polythene D.P.M.
A	2	30mm Rockwool parhat fill ridgid insulation board.

B.R. AMENDMENTS.

APPROVED PLAN
Ref.

186/01 'C'

MR C LAWENCE, NENE MEADOWS
SUTTON BRIDGE SPALDING.

Proposed 2 storey extension & Carport
PLANS ELEVATIONS & SECTION

May 1989 SMD 1:50

AMENDED JULY 1989.
AMENDED AUGUST 89.
AMENDED APRIL 1995
AMENDED MARCH '96

SOUTH HOLLAND DISTRICT COUNCIL
17 MAY 1996
Ref: 0516/95