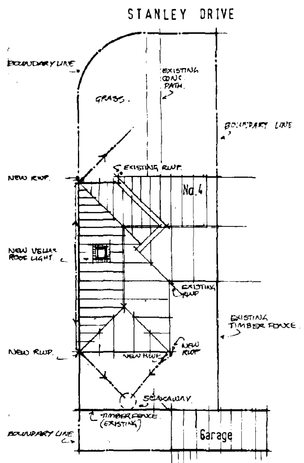
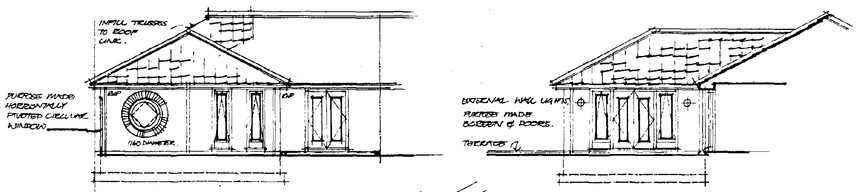


Front Elevation

Side Elevation

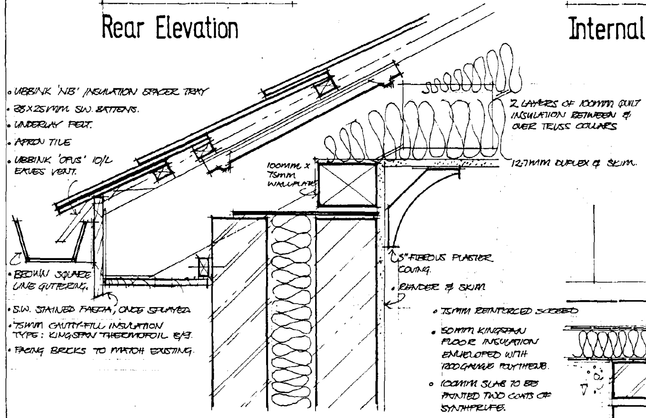


*Block Plan 1:200

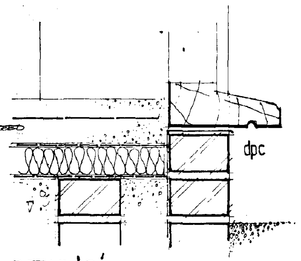


Rear Elevation

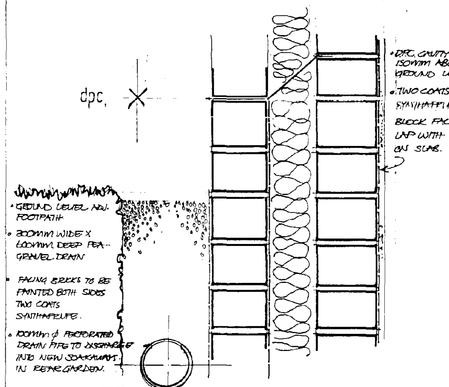
Internal Elevation



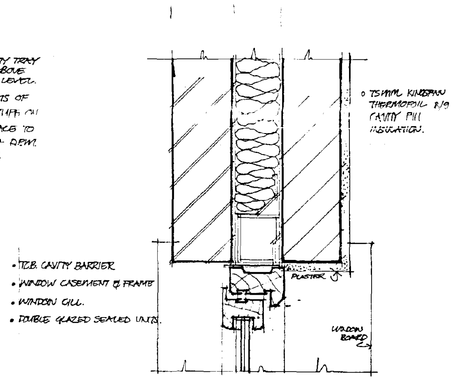
DETAIL 'B'



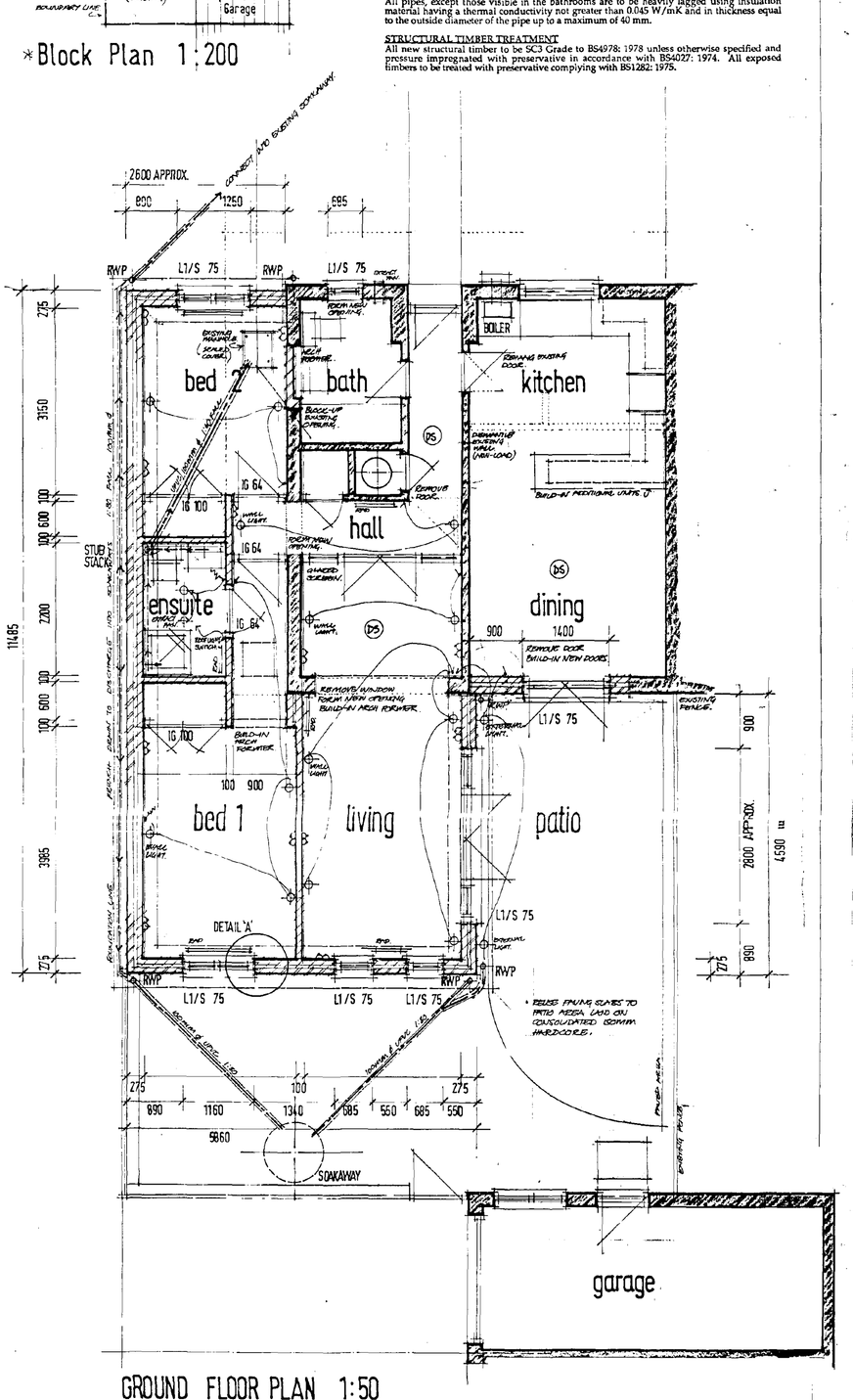
DETAIL 'D'



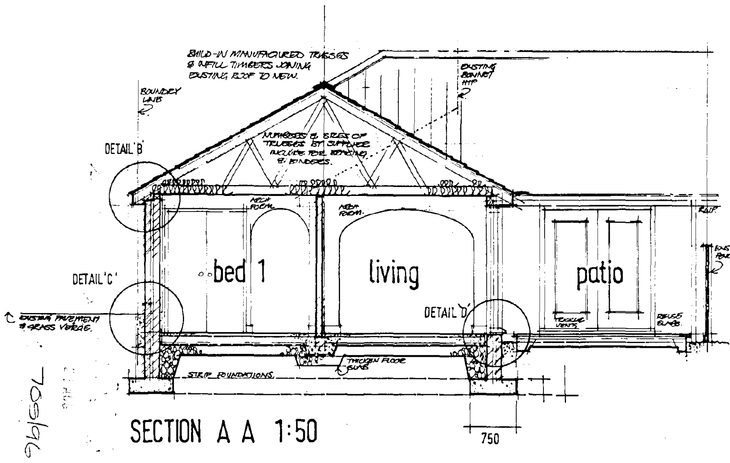
DETAIL 'C'



DETAL 'A'



GROUND FLOOR PLAN 1:50



SECTION A A 1:50

WINDOW AND DOORS

All external joinery to be purpose made and to be double glazed units, (6mm glass, 12 mm air gap), 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

All glass lower than 1.5 m above floor level to doors adjacent side lights and windows and all glass lower than 800 mm above floor level should be laminated or toughened glass and should be manufactured to BS:6206/1981.

DRAUGHT STRIPPING

To all new and existing joinery proprietory rubber double sealed draught strips are to be installed to all opening casements. Brush type draught seals to be provided the bottom of all internal and external doors except in the case of the additional sanitary accommodation.

RAINWATER GOODS

Rainwater goods to comprise square line brown PVCU guttering discharging into 65 mm PVCU down pipes in positions indicated on plan. Rainwater to discharge into existing drain runs.

CONCEALED SERVICES

All concealed services should be adequately boxed and sealed at floor and ceiling levels and piped services should be sealed where they project into hollow construction or voids including roof spaces and floor voids.

PLUMBING

All plumbing to be to BS5572: 1978 and to be as follows:-

Basin 32 mm dia waste with 75 mm deep seal trap.
Bath 40 mm dia waste with 75 mm deep seal trap.
W.C . 75 mm dia waste with 75 mm deep seal trap.

Plumbing runs to have 1.5º gradient and to include 110 mm UPVC soil and vent pipe where indicated on plan. SVP to terminate min 900 mm above highest opening into the building and finish with a bird proof cage. Include connection bosses where necessary and with access eye above highest connection. 50 mm common waste where individual runs exceed that permissible, with rodding eyes at all changes in direction.

PIPE WORK

All pipes, except those visible in the bathrooms are to be heavily lagged using insulation material having a thermal conductivity not greater than 0.045 W/mK and in thickness equal to the outside diameter of the pipe up to a maximum of 40 mm.

STRUCTURAL TIMBER TREATMENT

All new structural timber to be SCJ Grade to BS4978: 1978 unless otherwise specified and pressure impregnated with preservative in accordance with BS4027: 1974. All exposed timbers to be treated with preservative complying with BS1282: 1975.

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 full cavity fill using Kingspan Thermofoil B/9 and 100 mm thick high insulation blockwork, (7N/mm^2), 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. Between both leaves, fill the cavity with loan 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.

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

External Cavity Wall U-Value (Inglenook)

	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
Brickwork inner leaf		0.84	0.12
Inner surface			0.12
			2.45

U-Value = $\frac{1}{\text{Total Resistance}}$ = 0.41W/m^{2}K

STRIP FOUNDATIONS

Trench excavation to a firm base a minimum of 750 mm below ground level, (unless otherwise agreed with Building Control). Foundations to be 750 mm wide for 275 mm cavity walls. Back fill excavation with ready mixed concrete C20P to BS5328 or a 1:2:4 mix will be satisfactory. Foundation depth to be a minimum of 250 mm thickness. Foundation excavation to be inspected by Local Authority Building Control Officer.

DAMP PROOF COURSE

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 raft.

GROUND FLOOR, FLOOR CONSTRUCTION

Excavate to reduced levels. Lay a minimum of 150 mm blinded hardcore in 150 mm maximum layers. Blind with sand, lay 1200 gauge polythene. Lay 50 mm Kingspan Insulation Board fully enveloped with polythene. 400 mm C20P concrete. Lay 65 mm thick reinforced floor screed.

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. Provide where indicated a 450 mm nominal diameter PVCU inspection chamber complete with blanking pieces to unused connections as required. Bed inspection chamber on 100 mm pea gravel and surround with grade C20P concrete, 100 mm thickness. Cover to comprise 450 mm internal diameter BS497 grade 'B' cast iron cover and frame bedded in cement mortar. Drain runs serving gullies to have a minimum fall of 1:40. Drain runs to discharge into existing foul drain and public sewer.

ROOF CONSTRUCTION

Concrete interlocking tiles to be fixed in accordance with BS5534:1978 on 38 x 25 mm softwood preservative treated battens at gauge to suit slates. Construct roof with prefabricated trussed rafters designed to BS5268 Part 3: 1985 at 600 mm maximum centres to pitch indicated on section, together with 100 mm x 25 mm diagonal windbraces, ridge binders, ceiling binders, including diagonal bracing to ceiling members and internal truss members, (twice nailed to each truss), all in accordance with manufacturers details and British Standards. Provide galvanised mild steel truss clips to each truss. Supply Local Authority with truss manufacturers design certificate and calculations for approval prior to erection of the roof on site. Build-in 30 mm x 5 mm galvanised mild steel anchor straps at 1.8 m maximum centres fixed to 2 No. trusses at rafter and ceiling tie level with No. 12 x 5 mm Sheradized wood screws. Include for solid noggins between truss and wall and between each truss. Straps to have 150 mm downturn hooked over inner leaf of cavity wall.

Build-in 30 mm x 2.5 mm galvanised mild steel holding down straps at 2 m maximum centres straps to be 900 mm long and fixed to feet rafters, wallplate and wall with No. 12 x 5 mm Sheradized wood screws, (6 fixings to wall). Provide additional straps either side of openings to maintain number of straps as for equivalent uninterrupted wall.

Build-in eaves ventilator at eaves level to provide an equivalent of 10 mm continuous air gap.

Fix 12.7 mm Duplex plasterboard complete with noggins to all unsupported edges. Plaster skim finish to all ceilings. Fix 125 mm Gyproc coving to all ceilings.

Form 1 No. insulated loft hatch 600 mm x 900 mm in position indicated. Build-in trimmers 47 mm x 100 mm deep with door stop to inner edge. Build-in 6 mm WBP plywood loft hatch with 50 mm extruded Eurohance insulation Board glued to top side. Provide double sealed proprietory rubber draft strips to perimeter of loft hatch. Build-in a screw fastening device to ensure proper compression of draught strips.

Lay two layers of 100 mm quilt insulation to a depth of 200 mm over truss cords providing an uninterrupted layer of roof insulation from wallplate to wallplate.

INTERNAL BLOCKWORK WALLS (NON-LOADBEARING)

Non loadbearing internal walls to comprise 100 mm thickness blockwork to BS6073:1981 minimum 4N/mm^2 crushing strength. Build blockwork walls off precast floor where indicated. Build off dpc at floor level and add plaster and skim finish to both sides.

VENTILATION

All windows to habitable rooms should incorporate a minimum of 8,000 mm^2 trickle ventilators for background ventilation. All windows and doors to kitchens and bathrooms should have at least 4000 mm^2 trickle ventilators for background ventilation. Background ventilation should be controllable, secure and located so as not to cause a draught.

All separate sanitary accommodation should be provided with mechanical extract ventilation having an extraction rate of 15 litres per second and having a 15 minute overrun which may be controllable manually or automatically. Both doors to leading to the lobby and sanitary accommodation should provide at least a continuous 10 mm gap beneath the door with the provision of providing air flow.

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

CENTRAL HEATING AND DOMESTIC HOT WATER SUPPLY

Existing mains gas fired boiler is to be assessed by Plumbing and Heating Engineer for its appropriateness to cope with the additional radiators to the extension. Should the boiler be recommended replacement with a

SMOKE DETECTORS

Provide smoke detectors in the positions indicated on plan. The smoke detectors should be located within 7 m of doors to kitchens, living rooms and dining rooms and be within 3 m of doors to bedrooms. Smoke detectors are to be mains operated with battery backup conforming to BS5446. All smoke alarms are to be interlinked.

LINTELS

All lintels specified to be manufactured by I G Lintels Limited 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.

H. DOGGET.

SINGLE STOREY EXTENSION: 4 Stanley Drive, Sutton Bridge. **Working Drawing**

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July 96

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REVISED AUG '96