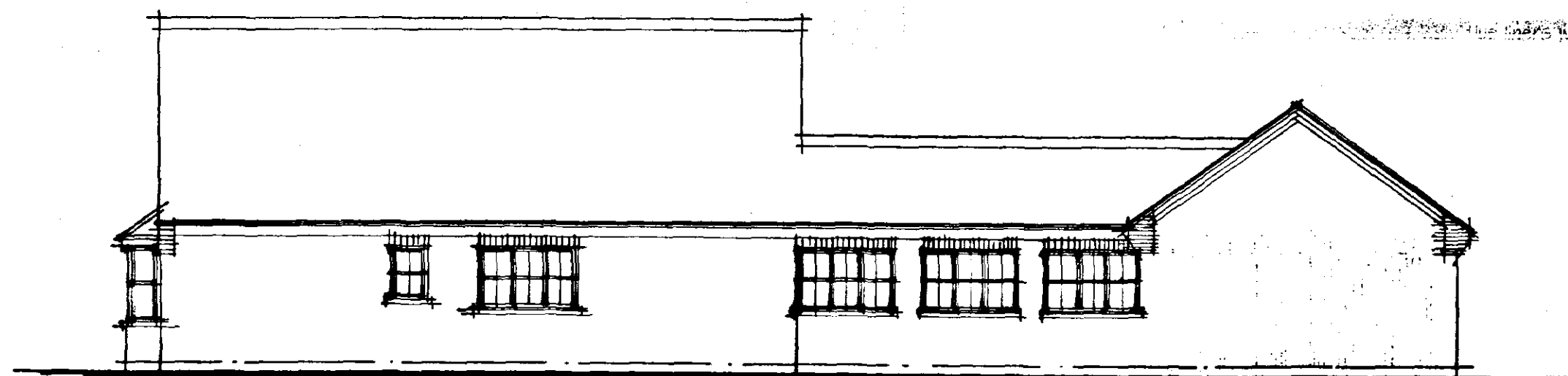
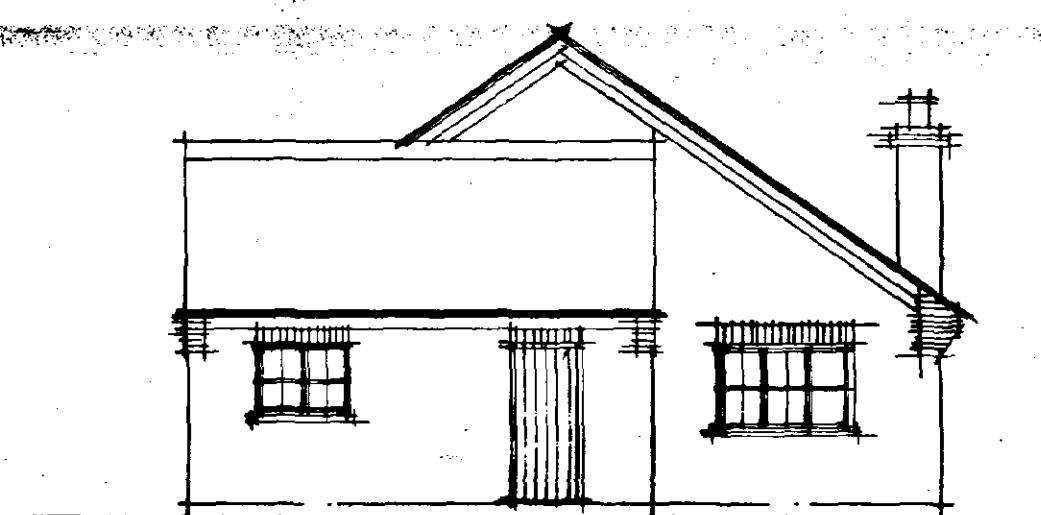
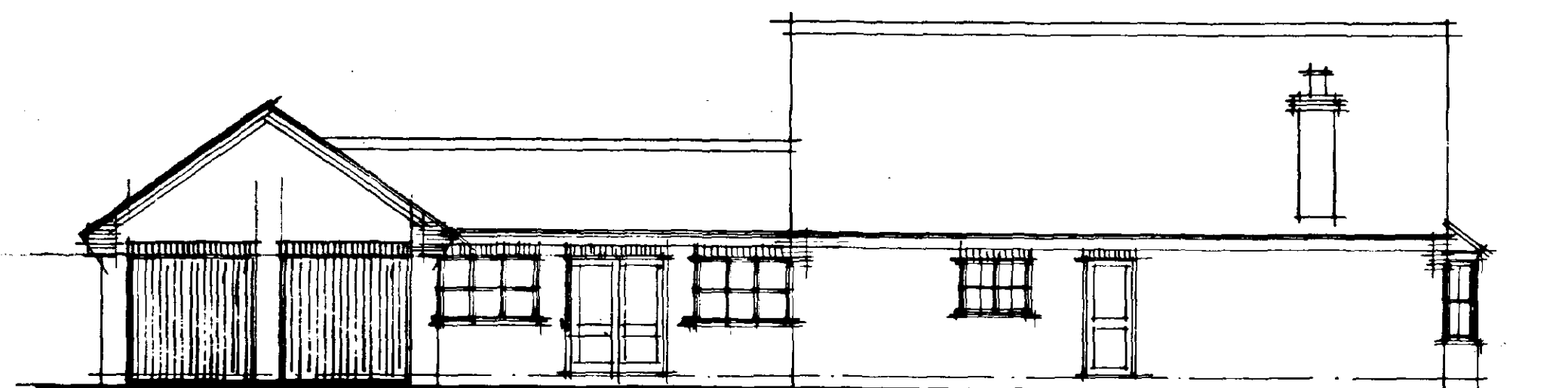




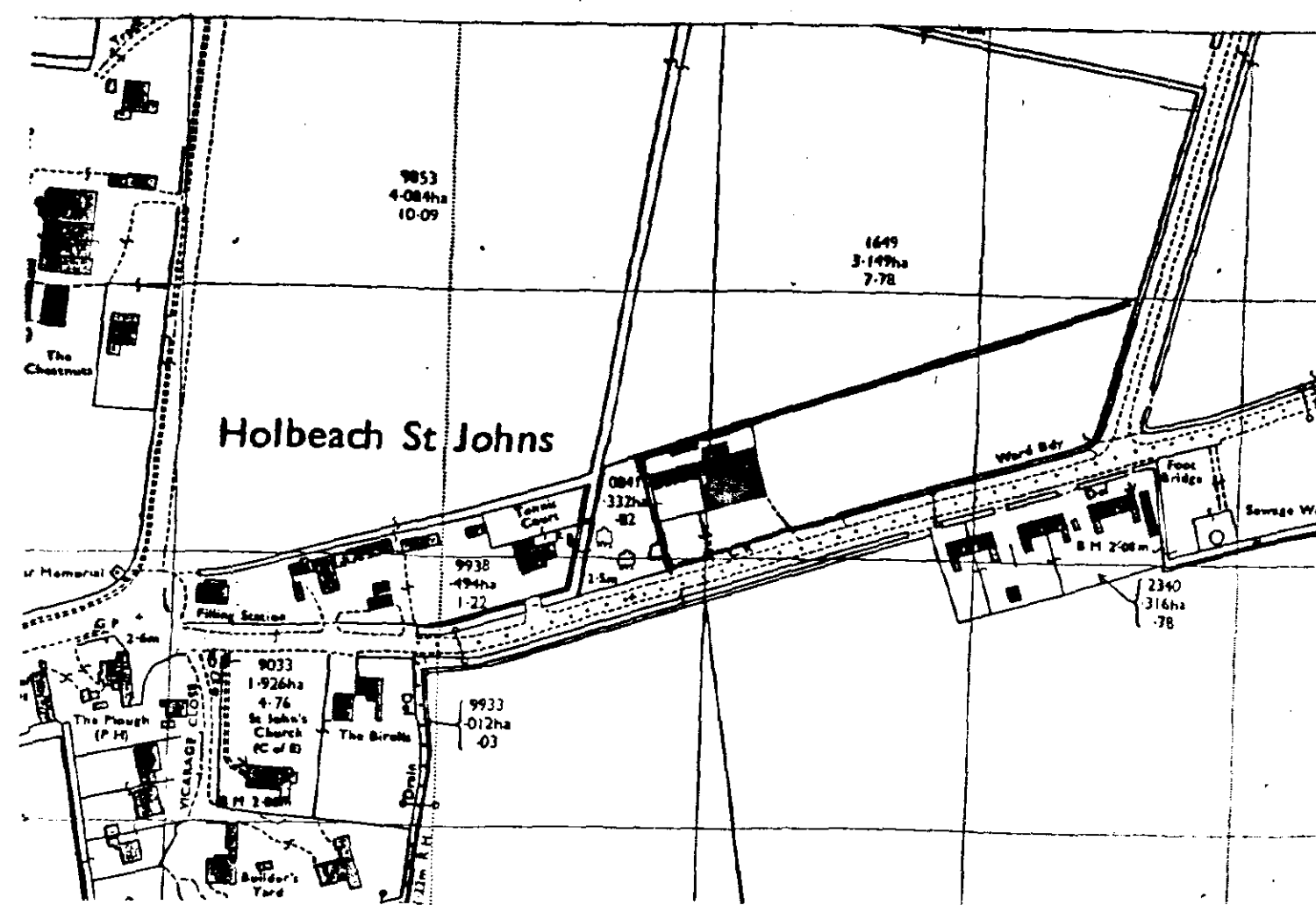
SIDE ELEVATION



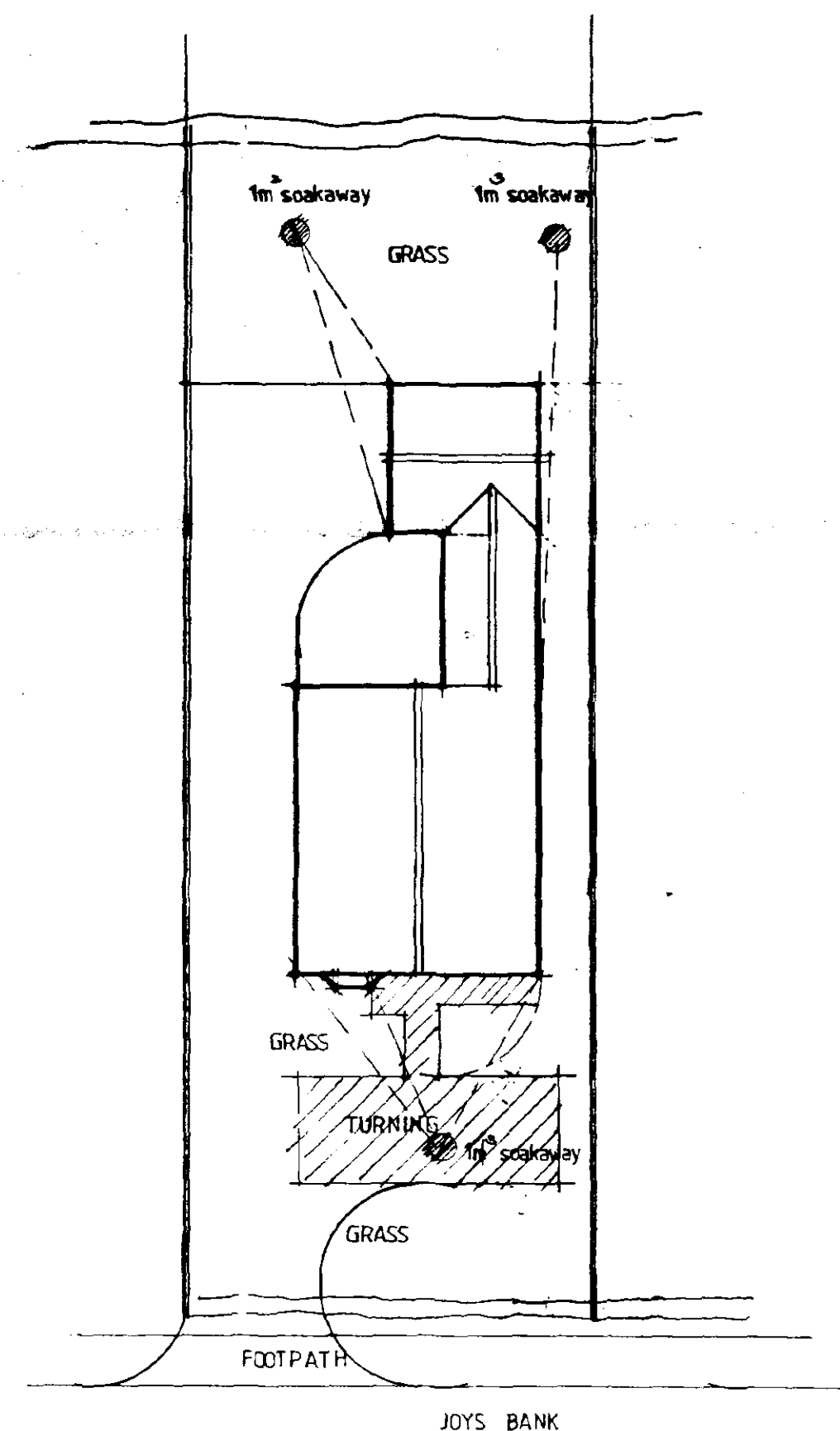
REAR ELEVATION



SIDE ELEVATION



LOCATION PLAN 1:2500



SITE PLAN

FIREPLACE
Chimney & fireplace to be constructed of non-combustible material. The hearth should be min 125mm thick of non-combustible material, projecting min. 500mm from chimney breast and 150mm from fire recess. 2 no. Fireguard clips fixed one each side of chimney breast. Flues should be min 225 dia. clay flue liners with rebated sockets uppermost to prevent condensation as described in B.S. 1181:1971 (1977) Clay flue linings & flue terminals. Chimney to have 2 no. courses of engineering brick DPC above intersection of roof. Code 4 lead flashing to roof & chimney stack. Chimney to terminate 600mm above ridge or 1m above highest point of intersection with roof, if more than 600mm from ridge. No combustible material to be within 40mm of face of chimney masonry

SMOKE DETECTORS
Smoke detectors to be interconnected and run off mains with separate circuit at distribution board, to a min standard of BS5839:Part 1: Standard L3.

WINDOWS
All windows to be double glazed and fitted with trickle vents providing the following background ventilation:-
Habitable rooms 8,000mm²
Kitchen, W.C., Utility and Baths. 4,000mm²
All glass lower than 15m above floor level, to doors adj. Sidelights and windows, and lower than 800mm above floor level should be break safety glass or laminated or toughened glass to B.S. 6206:1981.
Double glazing to have min 12mm air gap between glass.

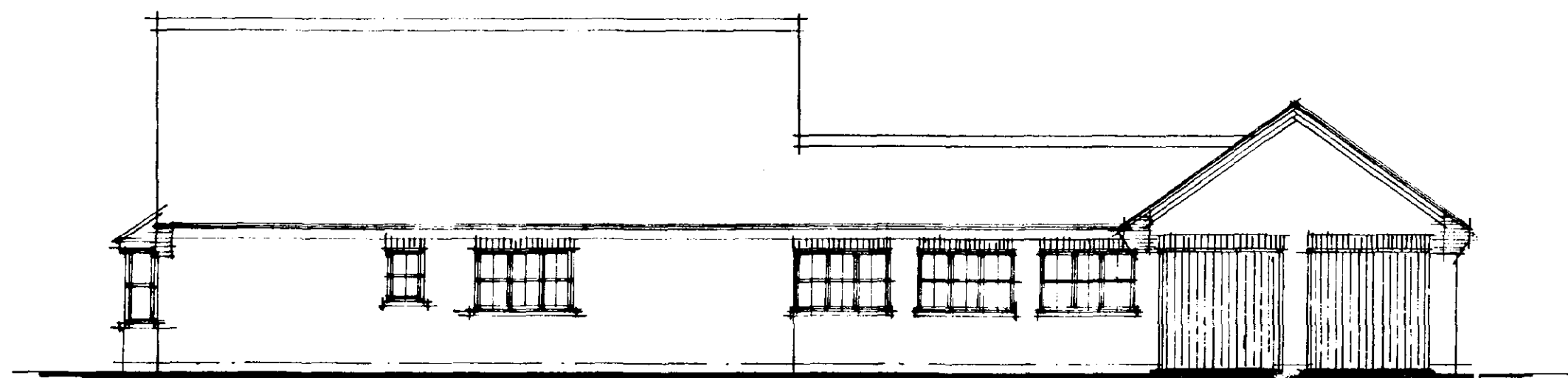
DRAFT PROOFING
Limiting infiltration
The following methods satisfy the requirements:-
Fitting draught-stripping in the frames of operable elements on windows, doors and roof lights.
Sealing around floor and ceiling hatches.
Ensuring boxing for concealed services is sealed at floor and ceiling levels and sealing piped. Services where they penetrate or project into hollow constructions or voids.

CEILINGS
12.5mm plasterboard ceiling to underside of joists.
Shiplap boarding to all external ceilings.
Artex or plaster skin finish.

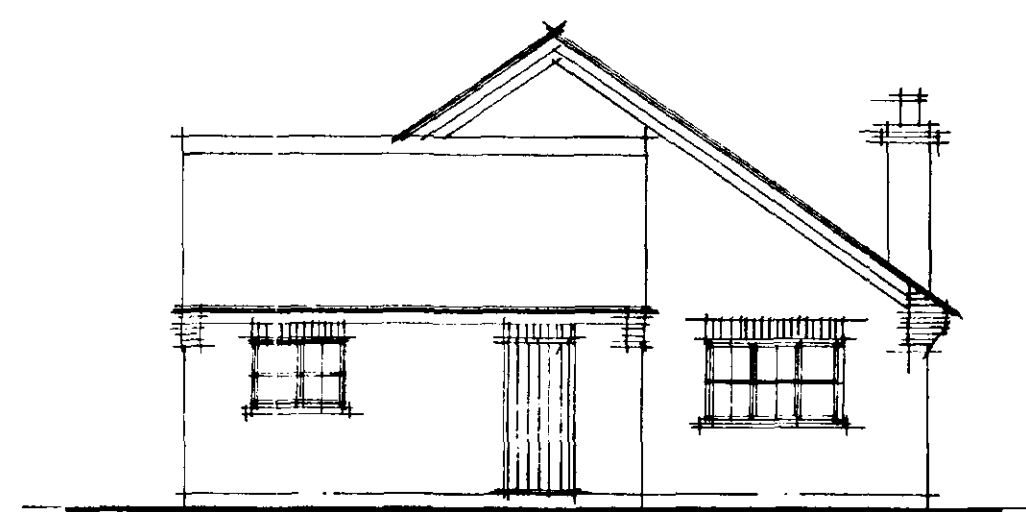
Peter Humphrey Associates ARCHITECTURAL DESIGN AND BUILDING			
PROJECT: Proposed Bungalow			
Plot 2 Joys Bank Holbeach St Johns			
CLIENT: Kempston Homes			
DATE: 02.02	SCALE: 1:100 1:250	JOB NO: 2533/2A	
DATE REVISED: AND SO ON		DETAILS: AWARDED	

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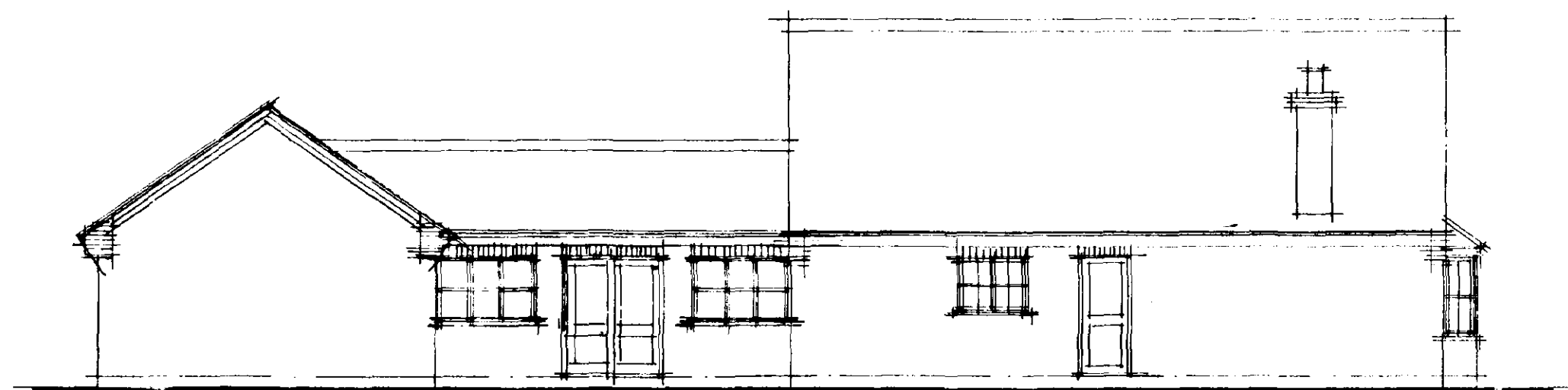
P Architectural	Peter Humphrey Associates ARCHITECTURAL DESIGN AND BUILDING
	TELEPHONE 01945 466 966 18 OLD MARKET, WIRBECH, CAMBS, PE15 1NB E-MAIL: PHO@PETERHUMPHREYARCHITECTURAL.CO.UK



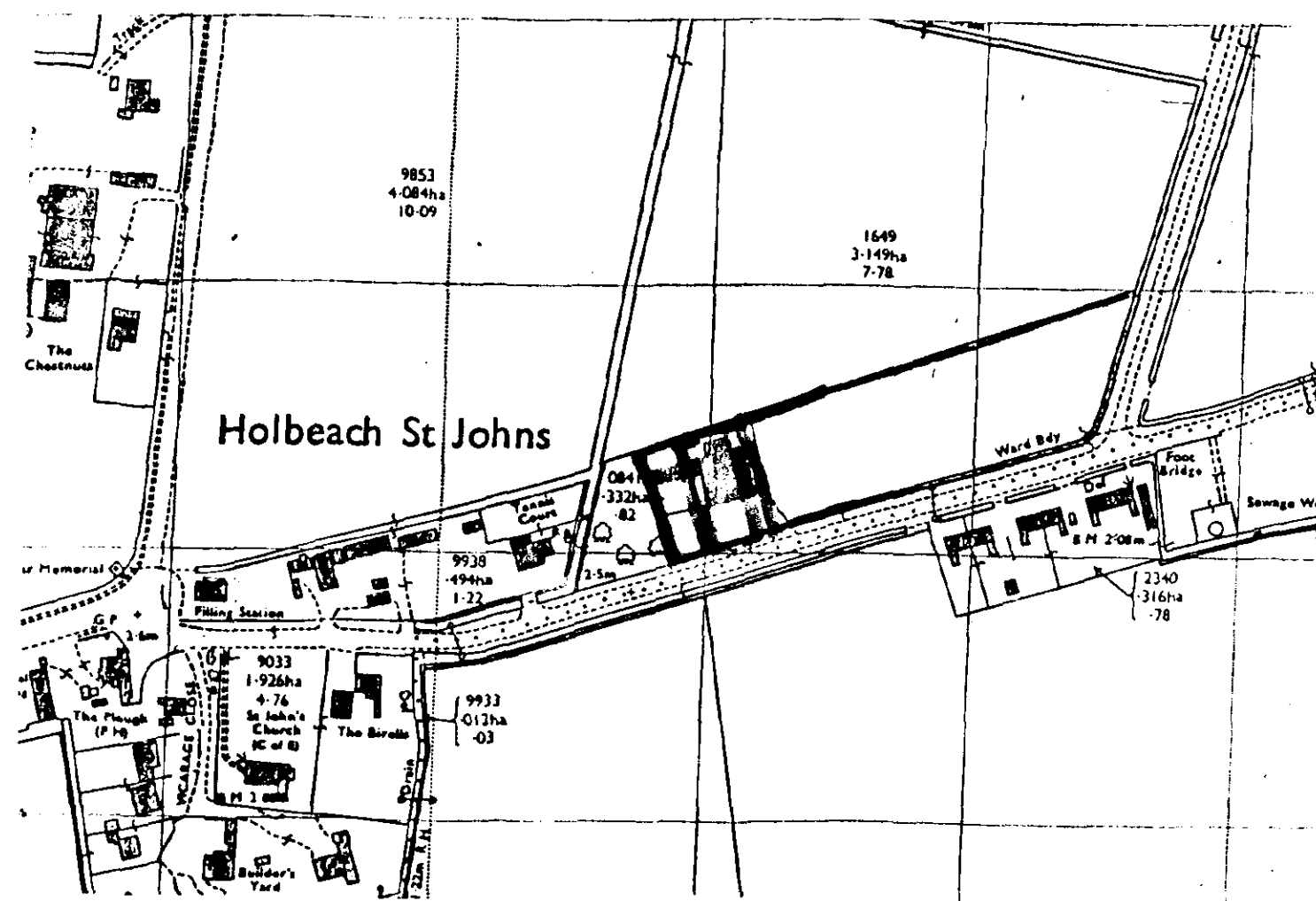
SIDE ELEVATION



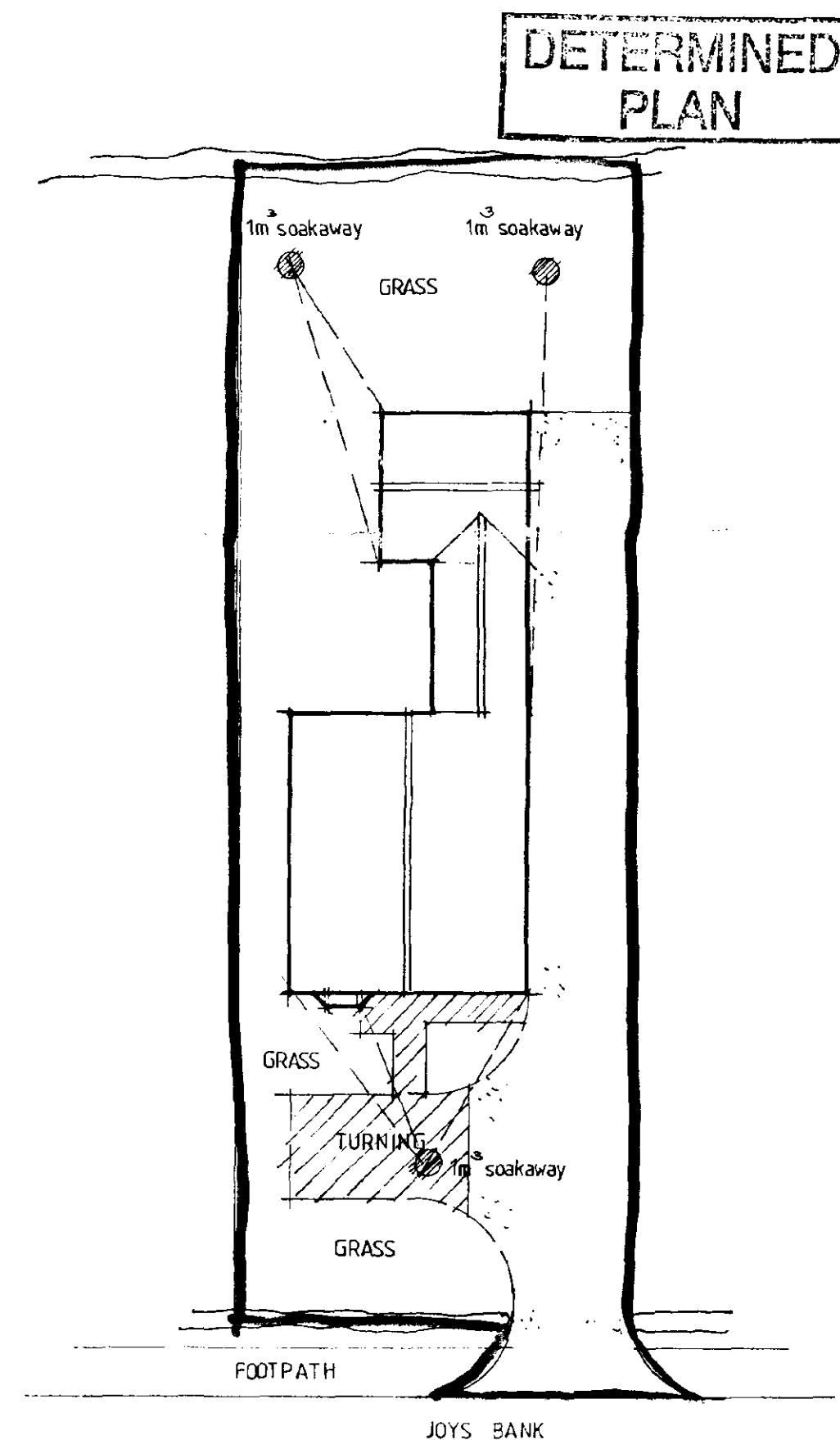
REAR ELEVATION



SIDE ELEVATION



LOCATION PLAN 1:2500



SITE PLAN

SHDC
Planning & Development
11 FEB 2002
Ref 0151/02

FIREPLACE
Chimney & fireplace to be constructed of non-combustible material. The hearth should be min 125mm thick of non-combustible material, projecting min. 500mm from chimney breast and 150mm from fire recess. 2 no. Fireguard clips fixed one each side of chimney breast. Flues should be min 225 dia. clay flue liners with rebated sockets uppermost to prevent condensation as described in B.S. 1181:1971 (1977) Clay flue linings & flue terminals. Chimney to have 2 no. courses of engineering brick DPC above intersection of roof. Code 4 lead flashing to roof & chimney stack. Chimney to terminate 600mm above ridge or 1m above highest point of intersection with roof, if more than 600mm from ridge. No combustible material to be within 40mm of face of chimney masonry

SMOKE DETECTORS
Smoke detectors to be interconnected and run off mains with separate circuit at distribution board, to a min standard of BS.5839:Part 1: Standard L3.

WINDOWS
All windows to be double glazed and fitted with trickle vents providing the following background ventilation:-
Habitable rooms 8,000mm²
Kitchen, W.C., Utility and Baths. 4,000mm²
All glass lower than 1.5m above floor level, to doors adj. Sidelights and windows, and lower than 800mm above floor level should be break safety glass or laminated or toughened glass to B.S. 6206:1981.
Double glazing to have min 12mm air gap between glass.

DRAFT PROOFING
Limiting infiltration
The following methods satisfy the requirements:-
Fitting draught-stripping in the frames of operable elements on windows, doors and roof lights.
Sealing around floor and ceiling hatches.
Ensuring boxing for concealed services is sealed at floor and ceiling levels and sealing piped. Services where they penetrate or project into hollow constructions or voids.

CEILINGS
12.5mm plasterboard ceiling to underside of joists.
Shiplap boarding to all external ceilings.
Artex or plaster skin finish.

Peter Humphrey Associates
ARCHITECTURAL DESIGN AND BUILDING

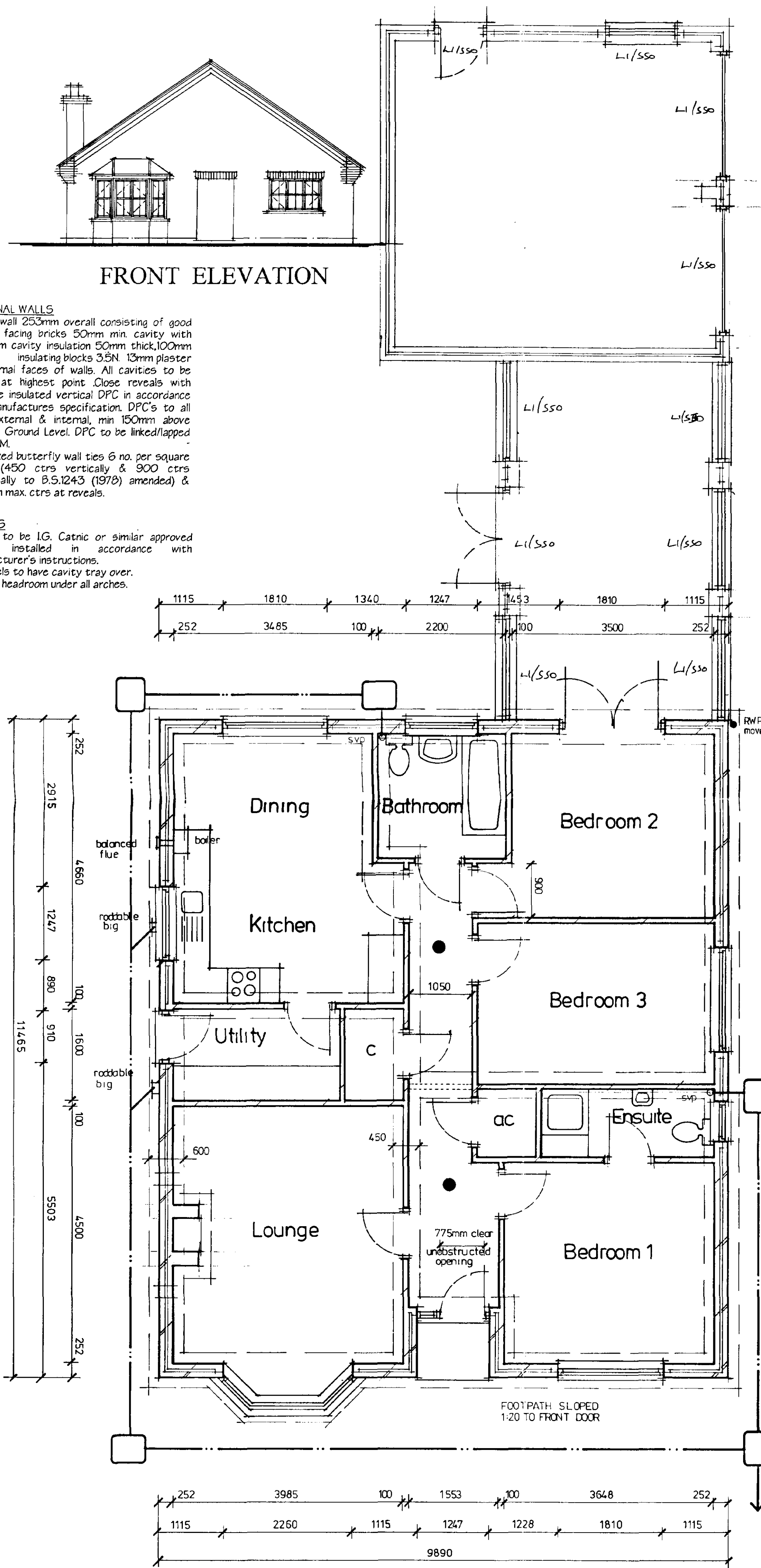
PROJECT
Proposed Bungalow
Plot 2
Joys Bank
Holbeach St Johns

CLIENT
Kempston Homes

DATE 02/02	SCALE 1:100 1:250	JOB NO 25 33/2
DATE REVISED	DETAILS	

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Peter Humphrey Associates
ARCHITECTURAL DESIGN AND BUILDING
TELEPHONE 01945 466 966
10 OLD MARKET, HOLBEACH, CAMBS, PE11 1JH
E MAIL: INQUIRIES@PETERHUMPHREY.CO.UK

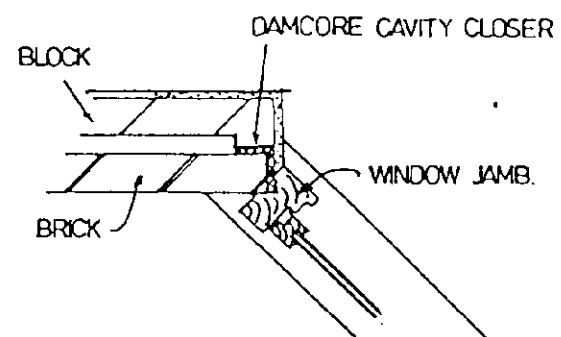


EXTERNAL WALLS
Cavity wall 253mm overall consisting of good quality facing bricks 50mm min. cavity with Drichem cavity insulation 50mm thick, 100mm Durac insulating blocks 3.5N. 13mm plaster to internal faces of walls. All cavities to be sealed at highest point. Close reveals with damcore insulated vertical DPC in accordance with manufacturer's specification. DPC's to all walls external & internal, min 150mm above Finished Ground Level. DPC to be linked/lapped with DPM.
Galvanized butterfly wall ties 6 no. per square metre (450 ctrs vertically & 900 ctrs horizontally to B.S.1243 (1978) amended) & 300 mm max. ctrs at reveals.

UNTELS
Lintels to be IG. Catnic or similar approved lintels installed in accordance with manufacturer's instructions.
IG. lintels to have cavity tray over. Min. 2m headroom under all arches.

EXTRACTOR FANS
Kitchen to have extract rate of 30 Litres/second adjacent to a hob or 60. Litres/second elsewhere.
Bathrooms to have extract rate of 15 Litres/second.
Utility to have extract rate of 30 Litres/second all ducted to external air.

BAY WINDOWS ROOF
Rafters 47x100@400mm ctrs
Ceiling joists 47x125 mm@400mm drs
Roof to be warm roof construction using Celotex double R GA2038 insulating board on top of rafters.
Felt to be Tyvek HD Plus with counter battens.

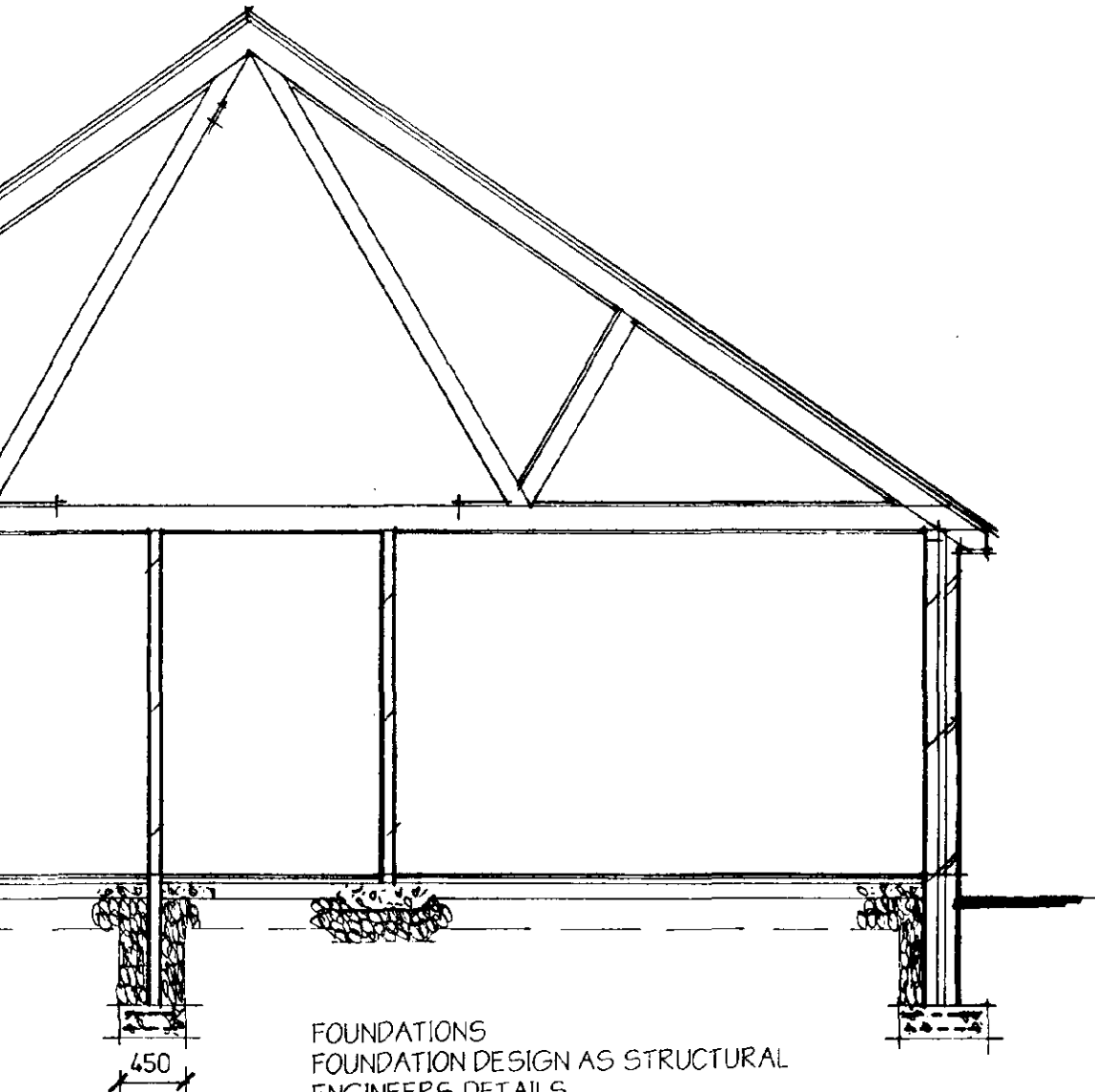


Part plan of Bay Window

ROOF CONSTRUCTION
Roof truss manufacturers to provide design details & calculations of truss to L.A. prior to commencement of work on site. Truss rafters at 600mm max. ctrs, bracing & tank stand to TPA recommendations in accordance with B.S.5268 Part 2 & 3 1985.
100 x 75 wall plate, strapped to wall with 30 x 5 mm m.s. straps 1500 long once bent over at 2m ctrs. Fixed back to wall. Trusses fixed to wall plate by galvanized truss clip or tosh nailed.
30x5 mm m.s. straps 1500 long at 2m ctrs laid over 3 no. ceiling joists & up rake of rafters at gables, all with solid packing.
Concrete interlocking tiles at 35° Pitch on 38x25mm battens on untearable felt to B.S.747.
Roof insulation to be 2 No. layers of 100mm fibreglass insulation running opposite ways.
Cross ventilation maintained with Redland Reagent Eaves Ventilators, giving min 10mm air gap & preventing insect penetration. Installed in accordance with manufacturer's instructions.
Valleys constructed via GRP valley troughs.
Compound truss to manufacturer's specification.
Roof hatch to be provided to gain access to roof void and water tanks. Moisture resisting chipboard to be used to form a walkway from hatch to tanks.
Roof hatches to be insulated & draught sealed & lockable.

Table 1 Minimum widths of corridors and passageways for a range of doorway widths

Doorway clear opening width (mm)	Corridor/passageway width (mm)
750 or wider	900 (when approach head-on)
750	1200 (when approach not head-on)
775	1050 (when approach not head-on)
800	900 (when approach not head-on)



SERVICES BELOW GROUND LEVEL
Where drains pass through walls/footings below ground level to be protected with Osma protection sleeve or similar to prevent entry of vermin.

BELOW DPC WALLS
Incorporate 7N/mm² block below Ground level. Lean mix concrete fill to cavity below Ground level.

HEATING
Boiler to be oil fired with balanced flue, durable wire guard over at ground floor level. All hot water pipes to be within insulated space unless adequately insulated.
Hot water storage vessel to be vented atmosphere & be well insulated.
Heating system to have zone controls, timing controls and boiler interlocks.
Zone controls required for hot water central heating systems, fan controlled electric storage heaters and electric panel heaters to control the temperatures independently in those areas that require different temperatures. The control devices could be room thermostats and/or thermostatic radiator valves at any other suitable temperature sensing devices. Timing devices should be provided to control the periods when heating systems operate. This provision should be made for gas fired and oil fired systems and for systems with solid fuel fired boilers where forced draught fans operate when heat is required.
Boiler control interlocks
Gas and oil fired hot water central heating systems controls should switch the boiler off when no heat is required whether control is by room thermostats or by thermostatic radiator valves.
Systems controlled by thermostats should fire only when a space heating or cylinder thermostats is calling for heat.
Systems controlled by thermostatic radiator valves should be fitted with flow control or other devices to prevent unnecessary boiler cycling.
Insulation of hot water storage vessel to be a 35mm thick factory applied coating of P.U. foam having zero ozone depletion potential and a minimum density 30 Kg/m³.
Hot water pipes connected to a hot water storage vessel including primary flow and returns to be insulated for at least one metre from their points of connection. Insulation thickness minimum 15mm. Hot water cylinder to be foam lagged type.

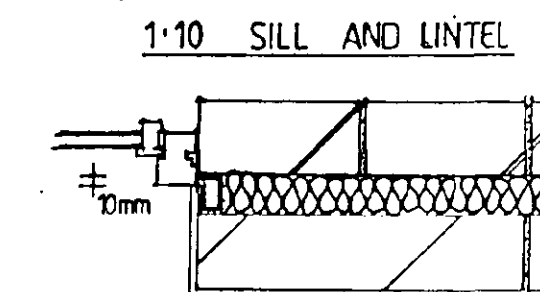
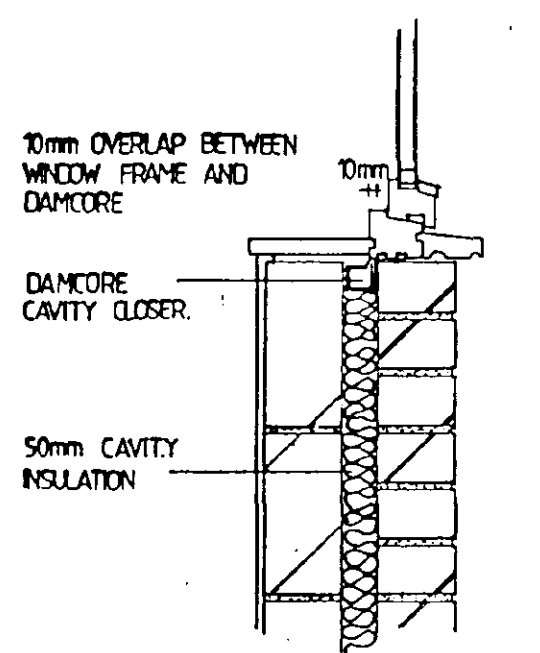
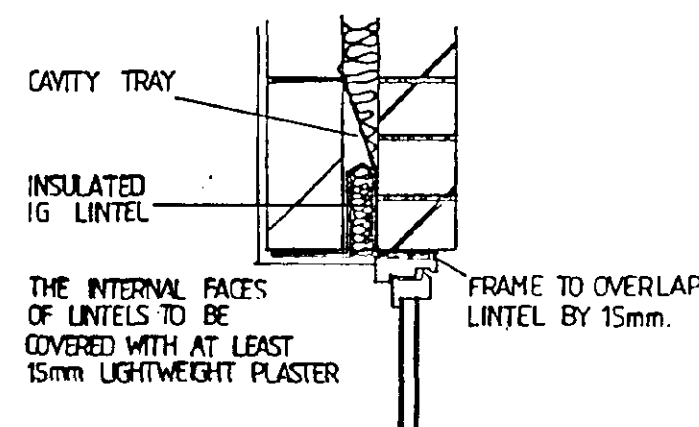
RAINWATER DRAINAGE
Surface water taken to soakaway min 4.5m from buildings.
Gutters 112mm dia. laid to fall 1:600, downpipes 68mm dia.
ALL DRAINS BE 100mm DIA. UPVC.
FALLS TO BE: 1:40 BETWEEN RWP and I.C.
1:70 BETWEEN I.C. and I.C.
1:70 BETWEEN RWP and SOAKAWAY

EXTERNAL WORK
Paths to be 75mm thick concrete on 100mm hard-core.
Movement joints at 4m ctrs.

TO BE READ IN CONJUNCTION WITH HOLYOAKE AND ASSOCIATES STRUCTURAL DETAILS

CONCRETE MIX
Min. grade RC35 with 20mm aggregate mechanically vibrated.

GROUND FLOOR CONSTRUCTION
Floor Slab:
30mm polystyrene topped with 19mm chipboard.
500 DPM Between chipboard and insulation on 100mm concrete slab on 1200 gauge Visqueen DPM on 25mm compacted sand blinding, on min. 150mm consolidated, max. fill 600mm DPM dressed up & linked with all DPC's in external and internal walls.



1:10 REVEALS

Diagram 24 Clear space for frontal access to WC

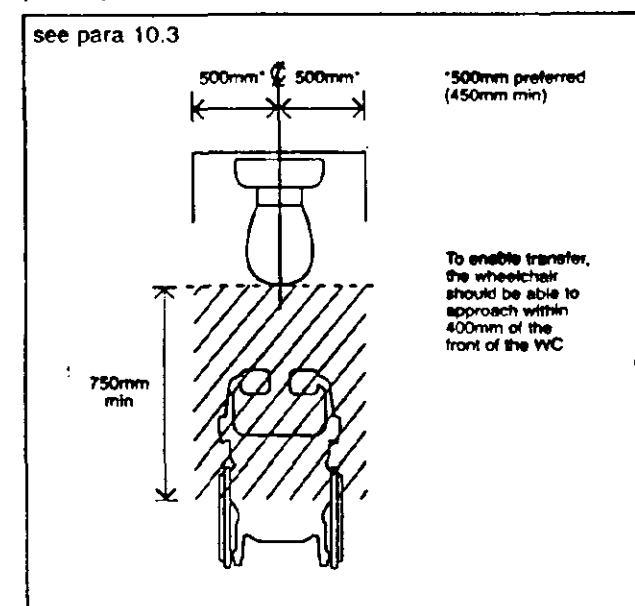
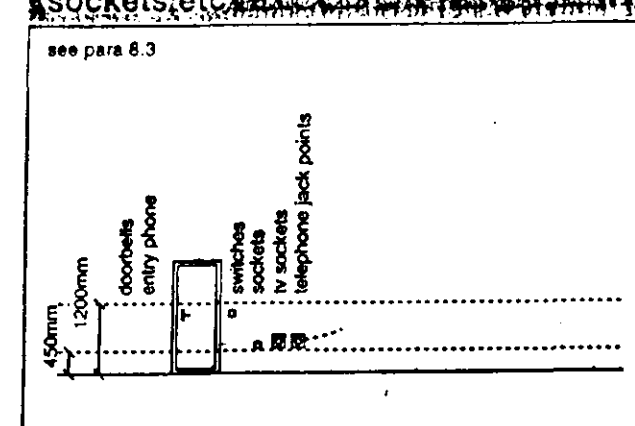


Diagram 22 Heights of switches, sockets etc.



ELECTRICAL KEY

SYMBOL	DESCRIPTION
⬢	DOUBLE SOCKET
⬢	EXTERNAL DOUBLE SOCKET
⬢	CEILING LIGHT
⬢	WALL LIGHT
⬢	EXTERNAL LIGHT
⬢	LIGHT SWITCH
⬢	PULL CORD LIGHT SWITCH
⬢	FLUORESCENT LIGHT
⬢	TELEPHONE POINT
⬢	SMOKE DETECTOR
⬢	COOKER POINT
⬢	DIMMER LIGHT SWITCH
⬢	SINGLE SOCKET
⬢	T.V. AERIAL
⬢	SINGLE RADIATOR
⬢	DOUBLE RADIATOR

SHDC
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11 FEB 2002
Ref 0151/2

CONDITIONAL APPROVAL
The contractors should check the building regulations approval notice for conditions. The appropriate manufacturer's details must be obtained & submitted to the building control office

Peter Humphrey Associates
18 Chapel Road
Cambridge CB2 3RQ
Telephone 01223 350000
Fax 01223 350001

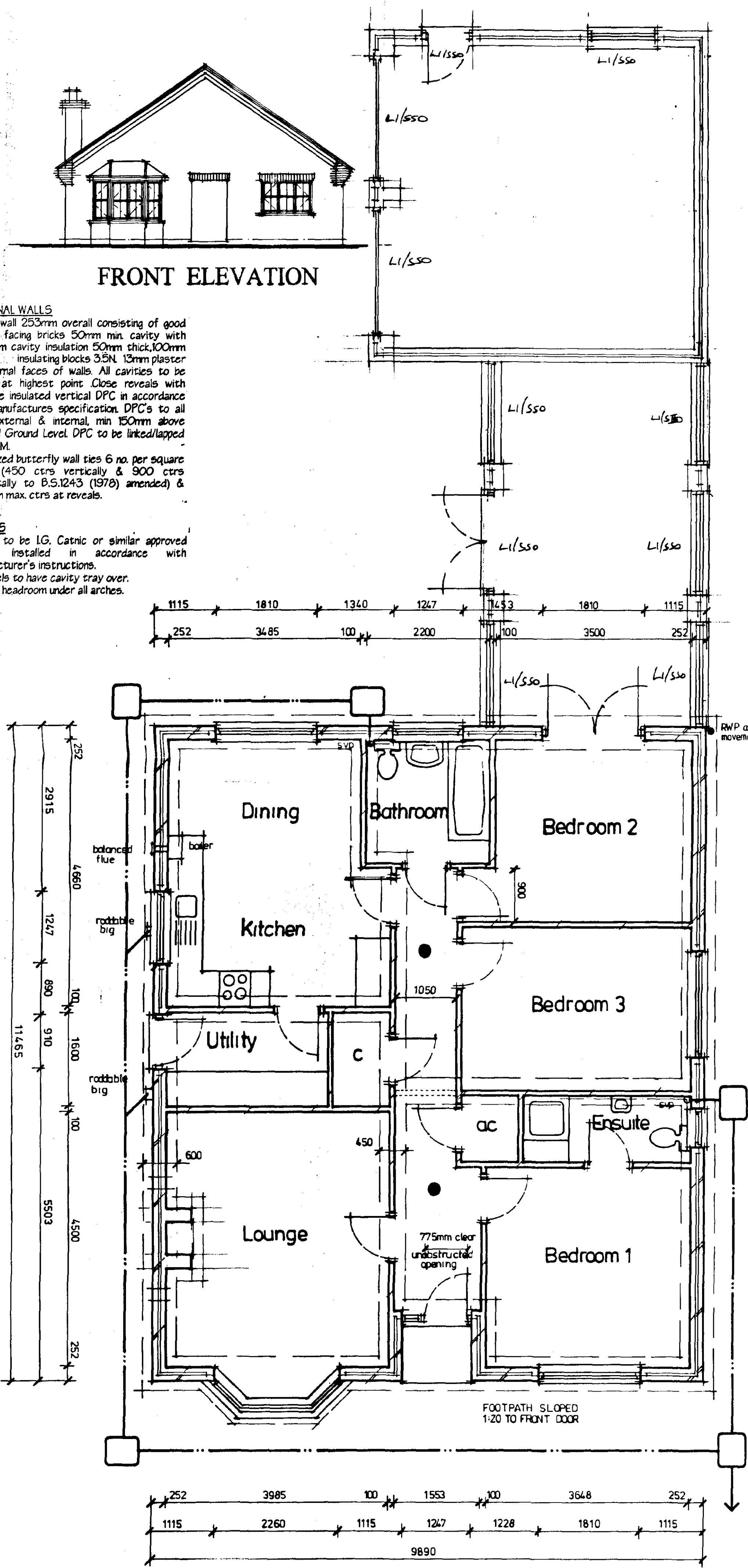
Proposed Bungalow
Plot 2
Joys Bank
Holbeach St Johns

CLIENT: Kempston Homes
DATE: Dec 1999
SCALE: 1:50 1:100
PROJECT: 2533/1
REVISED: A14-1 2000
Breg notes added

British Institute of Architectural Technologists

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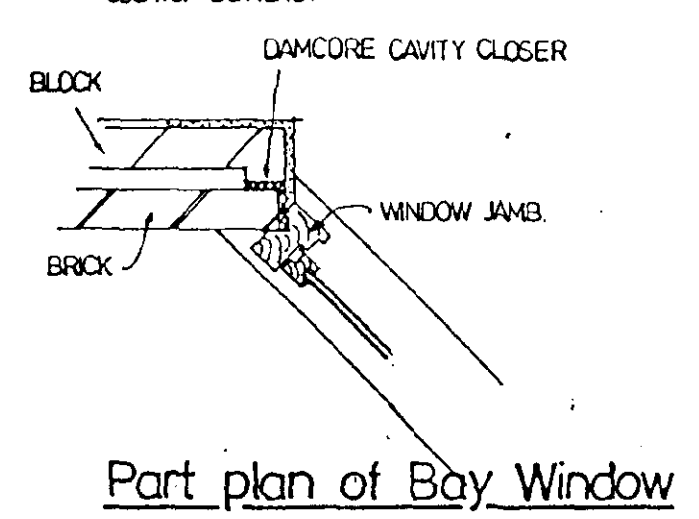


EXTERNAL WALLS
Cavity wall 250mm overall consisting of good quality facing bricks 50mm min. cavity with Durochem cavity insulation 50mm thick, 100mm Durac insulating blocks 3.5N 13mm plaster to internal faces of walls. All cavities to be sealed at highest point. Close reveals with damcore insulated vertical DPC in accordance with manufacturer's specification. DPC's to all walls external & internal, min 150mm above Finished Ground Level. DPC to be linked/lapped with DPM.
Galvanized butterfly wall ties 6 no. per square metre (450 ctrs vertically & 900 ctrs horizontally to B.S.1243 (1978) amended) & 300mm max. ctrs at reveals.

LINTELS
Lintels to be I.G. Catnic or similar approved lintels installed in accordance with manufacturer's instructions.
I.G. lintels to have cavity tray over.
Min. 2m headroom under all arches.

EXTRACTOR FANS
Kitchen to have extract rate of 30 Litres/second adjacent to a hob or 60 Litres/second elsewhere.
Bathrooms to have extract rate of 15 Litres/second.
Utility to have extract rate of 30 Litres/second all ducted to external air.

BAY WINDOWS ROOF
Roofers 47x100@400mm ctrs
Ceiling joists 47x125 mm@400mm ctrs
Roof to be warm roof construction using Calcelex double R GA2038 insulating board on top of rafters.
Felt to be Tyvek HD Plus with counter battens.



ROOF CONSTRUCTION
Roof truss manufacturers to provide design details & calculations of trusses to L.A. prior to commencement of work on site. Truss rafters at 600mm max. ctrs, bracing & tank stand to TPA recommendations in accordance with B.S.5268 Part 2 & 3 1986.
100 x 75 wall plate, strapped to wall with 30 x 5 mm m.s. straps 1500 long once bent over at 2m ctrs. Fixed back to wall. Trusses fixed to wall plate by galvanized truss clip or tish nailed.
30x5 mm m.s. straps 1500 long at 2m ctrs laid over 3 no. ceiling joists & up rake of rafters at gables, all with solid packing.
Concrete interlocking tiles at 35° Pitch on 30x25mm battens on untearable felt to B.S.747.
Roof insulation to be 2 No. layers of 100mm fibreglass insulation running opposite ways.
Cross ventilation maintained with Redland Redvent Eaves Ventilators, giving min 10mm air gap & preventing insect penetration. Installed in accordance with manufacturer's instructions.
Valleys constructed via GRP valley troughs.
Compound truss to manufacturer's specification.
Roof hatch to be provided to gain access to roof void and water tanks. Moisture resisting chipboard to be used to form a walkway from hatch to tanks.
Roof hatches to be insulated & draught sealed & lockable.

Table 1 Minimum widths of corridors and passageways for a range of doorway widths

Doorway clear opening width (mm)	Corridor/passageway width (mm)
750 or wider	900 (when approach head-on)
750	1200 (when approach not head-on)
775	1050 (when approach not head-on)
800	900 (when approach not head-on)

HEATING
Boiler to be oil fired with balanced flue, durable wire guard over at ground floor level. All hot water pipes to be within insulated space unless adequately insulated.
Hot water storage vessel to be vented atmosphere & be well insulated.
Heating system to have zone controls, timing controls and boiler interlocks.
Zone controls required for hot water central heating systems, fan controlled electric storage heaters and electric panel heaters to control the temperatures independently in those areas that require different temperatures. The control devices could be room thermostats and/or thermostatic radiator valves at any other suitable temperature sensing devices. Timing devices should be provided to control the periods when heating systems operate. This provision should be made for gas fired and oil fired systems and for systems with solid fuel fired boilers where forced draught fans operate when heat is required.
Boiler control interlocks
Gas and oil fired hot water central heating systems controls should switch the boiler off when no heat is required whether control is by room thermostats or by thermostatic radiator valves.
Systems controlled by thermostats should fire only when a space heating or cylinder thermostats is calling for heat.
Systems controlled by thermostatic radiator valves should be fitted with flow control or other devices to prevent unnecessary boiler cycling.
Insulation of hot water storage vessel to be a 30mm thick factory applied coating of P.U. foam having zero ozone depletion potential and a minimum density 30 Kg/m.
Hot water pipes connected to a hot water storage vessel including primary flow and returns to be insulated for at least one metre from their points of connection. Insulation thickness minimum 15mm. Hot water cylinder to be foam lagged type.

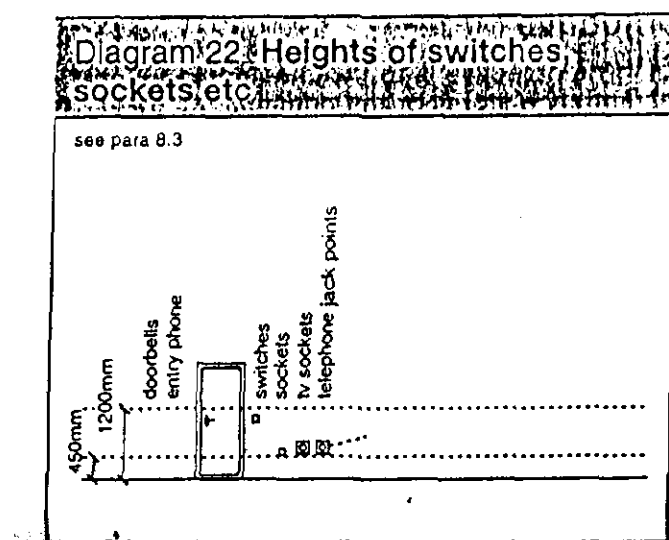
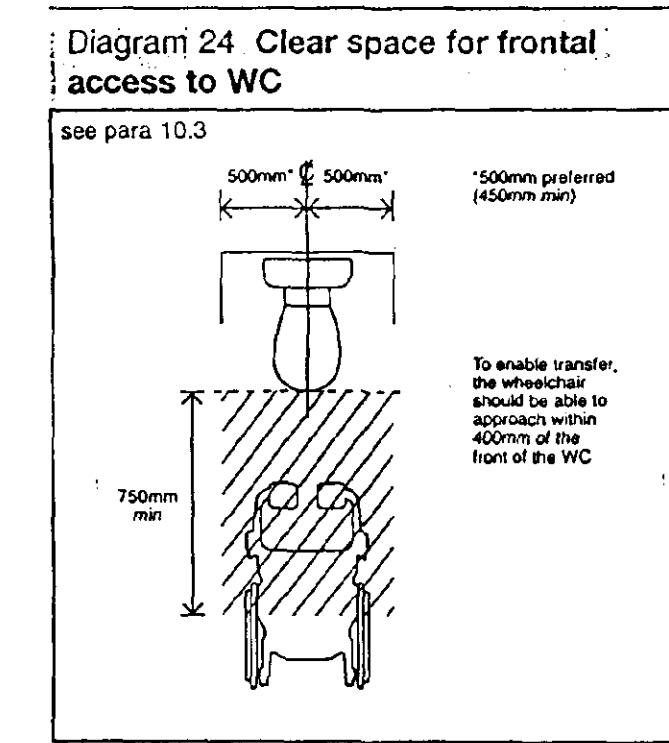
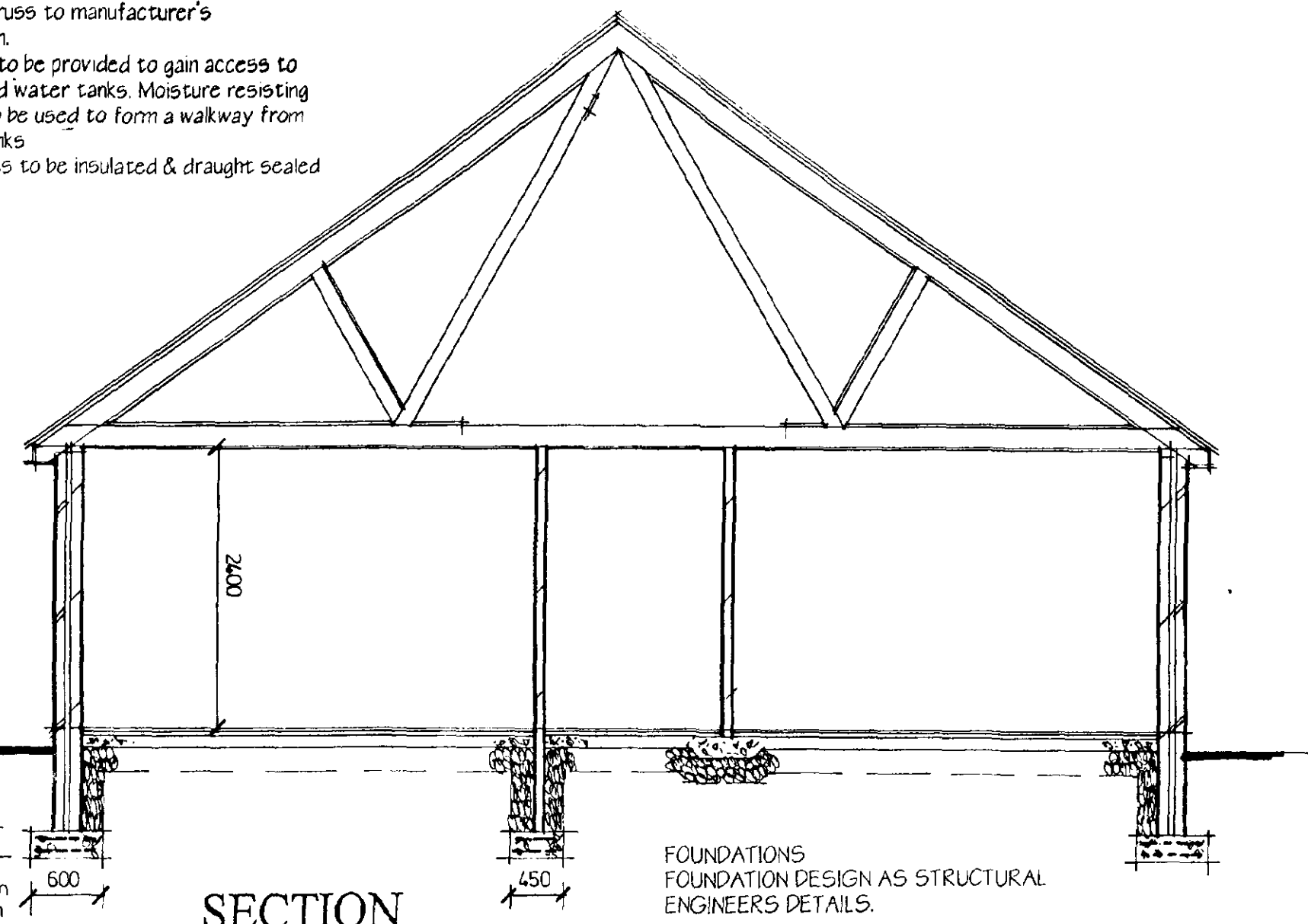
DRAINAGE
Inspection chambers to be Hepworth or similar approved polypropylene with 100mm dia. inlets, 450 dia. int. up to 1m deep, 1050mm dia. Up to 15m deep. Cast iron cover & frame, 100mm dia. Upvc foul & surface water drains bedded & surrounded in 150mm pea gravel.
Drains protected against differential movement where passing through walls to be wrapped in 25mm fibreglass & have lintels over. Drains protected where passing under floors if within 300mm of underside of floor slab, by surrounding in 25mm fibreglass & 150mm concrete.
Drains passing under road/drives to be protected if within 900mm of surface, by reinforced concrete bridging slab bearing on firm ground/L.C. in road/drives protected by surrounding in 150mm concrete. Cover & frame to have a wheel load of 15 tonnes. No connection to be made to s&vp within 450mm of invert. S&vp to terminate 900mm above nearest window opening balloon guard.
No bends to occur in wet section of s&vp. Bored in S&VP to terminate with ventilator tile.
Shower set on 150mm high plinth.
Front panel to shower to be screwed to allow access to clean waste.
All hand basins, baths & showers to have resealing traps Bath & sink 38 dia waste, shower 40 dia. Waste, hand basin 32 dia. waste, w.c. 100 dia. waste. Where runs over 1.7m waste pipes to be 40 dia. 75mm deep seal traps. Back inlet gutters to take waste pipes where s&vp not convenient.

RAINWATER DRAINAGE
Surface water taken to soakaway min 4.5m from buildings.
Gutters 112mm dia. laid to fall 1:600, downpipes 68mm dia.
ALL DRAINS BE 100mm DIA. UPVC.
FALLS TO BE: 1/40 BETWEEN SVP and I.C.
1/70 BETWEEN I.C. and I.C.
1/70 BETWEEN RWP and SOAKAWAY

EXTERNAL WORK
Paths to be 75mm thick concrete on 100mm hard-core.
Movement joints at 4m ctrs.

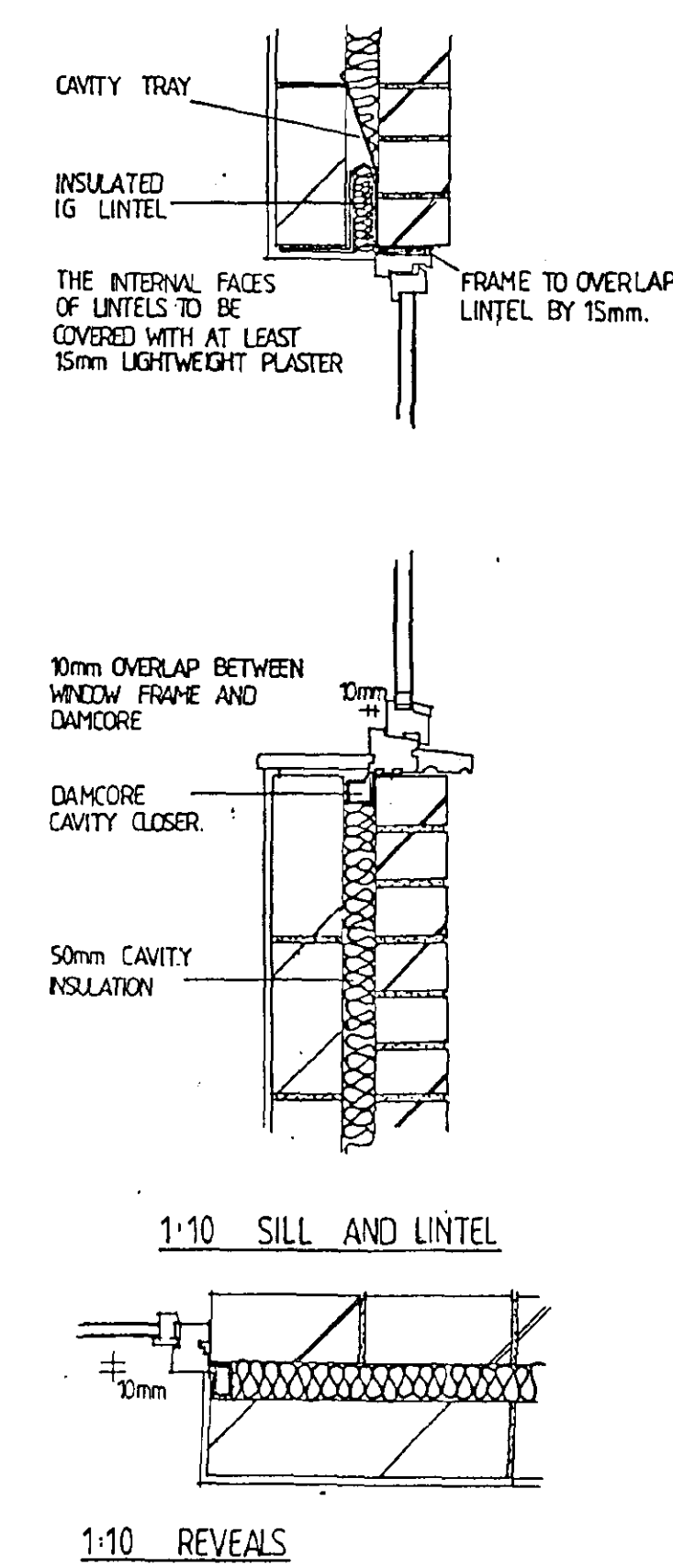
SERVICES BELOW GROUND LEVEL
Where drains pass through walls/footings below ground level to be protected with Osma protection sleeve or similar to prevent entry of vermin.

BELOW DPC WALLS
Incorporate 7Nmm² block below Ground level. Lean mix concrete fill to cavity below Ground level.



ELECTRICAL KEY

SYMBOL	DESCRIPTION
⬢	DOUBLE SOCKET
⬢ S	EXTERNAL DOUBLE SOCKET
⬢	CEILING LIGHT
⬢	WALL LIGHT
⬢	EXTERNAL LIGHT
⬢	LIGHT SWITCH
⬢	PULL CORD LIGHT SWITCH
⬢	FLUORESCENT LIGHT
⬢	TELEPHONE POINT
⬢	SMOKE DETECTOR
⬢	COOKER POINT
⬢	DIMMER LIGHT SWITCH
⬢	SINGLE SOCKET
⬢	T.V. AERIAL
⬢	SINGLE RADIATOR
⬢	DOUBLE RADIATOR



CONDITIONAL APPROVAL
The contractors should check the building regulations approval notice for conditions. The appropriate manufacturer's details must be obtained & submitted to the building control office

TO BE READ IN CONJUNCTION WITH HOLYOAKE AND ASSOCIATES STRUCTURAL DETAILS

CONCRETE MIX
Min. grade RC35 with 20mm aggregate mechanically vibrated.

GROUND FLOOR CONSTRUCTION
Floor Slab:
30mm polystyrene topped with 19mm chipboard.
500 DPM Between chipboard and insulation on 100mm concrete slab on 1200 gauge Visqueen DPM, on 25mm compacted sand blinding, on min. 150mm consolidated, max. fill 600mm DPM 150mm consolidated, max. fill 600mm DPM

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18 Chesham Road,
Woburn,
Cambridge CB3 9ET
Telephone 01462 466000

Proposed Bungalow
Plot 2
Joys Bank
Holbeach St Johns

Kempston Homes

DATE	SCALE	NO.
Dec 1999	1:50 1:100	2533/1
REVISED	BY	DATE
14.11.2000	Breg notes added	
10.05.02	A. M. D.	

British Institute of Architectural Technologists