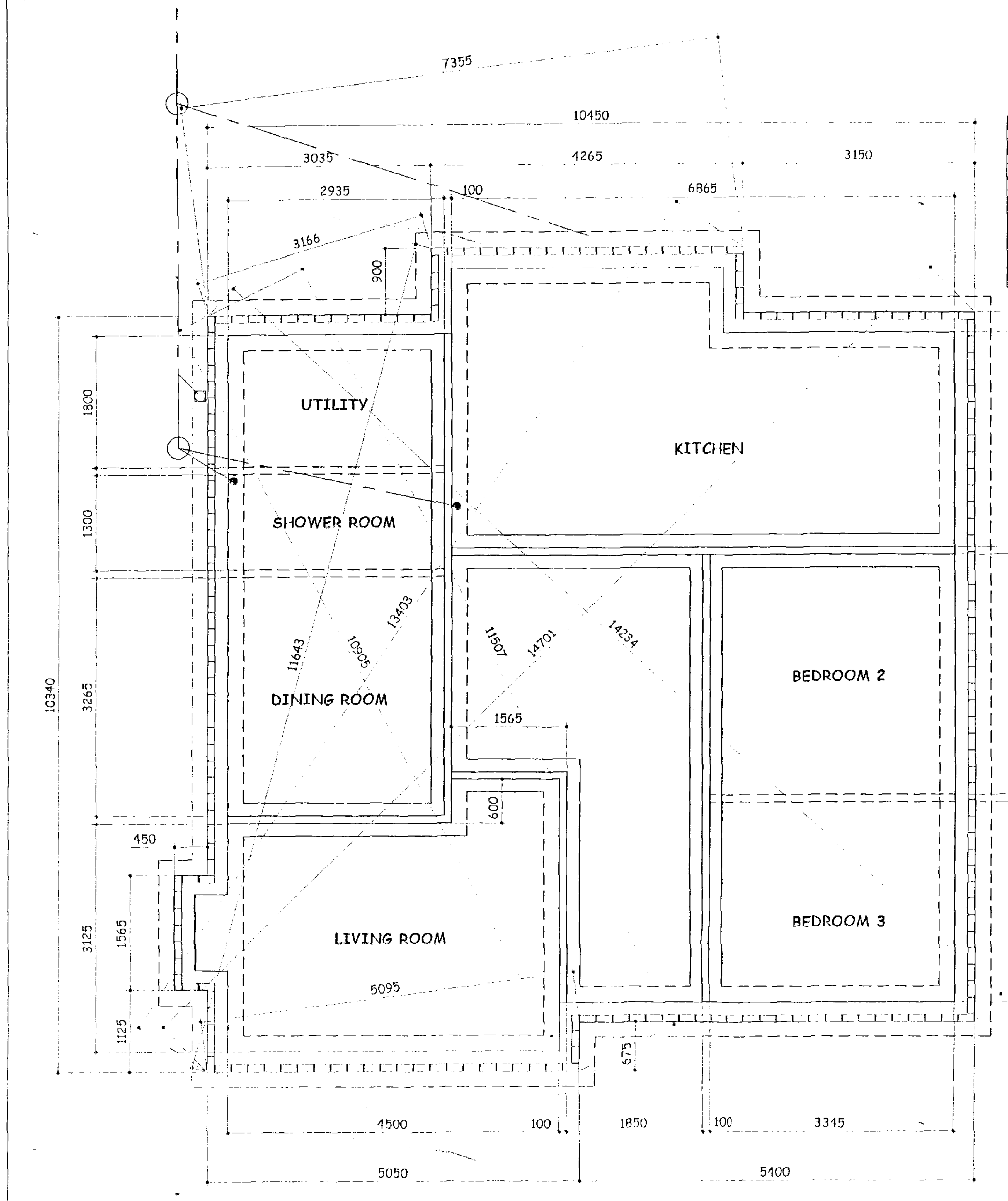
Contractor to check all Dimensions on site prior to ordering materials / commencing work.Do Not Scale from this Drawing - If in doubt then please ask



FOUNDATION & BRICKWORK SETTING OUT
Scale 1:50

BLOCK COMPARSION TABLE (to achieve a 'U' value of 0.35W/m²K)		
Manufacturer	100mm thk Block type	Full Fill Cavity insulation thickness
Thermalite	Shield	65mm
Plasmor	Fibolite	85mm
	Aglite	85mm
	Stranlite	85mm
	Plascon	100mm
Tarmac Topblock	Hemelite	85mm
	Lignacite	85mm
	Topcrete	100mm
	Durox Supabloc	65mm

Soffit and fascia profile to clients requirements fitted strictly in accordance with manufacturer's recommendations

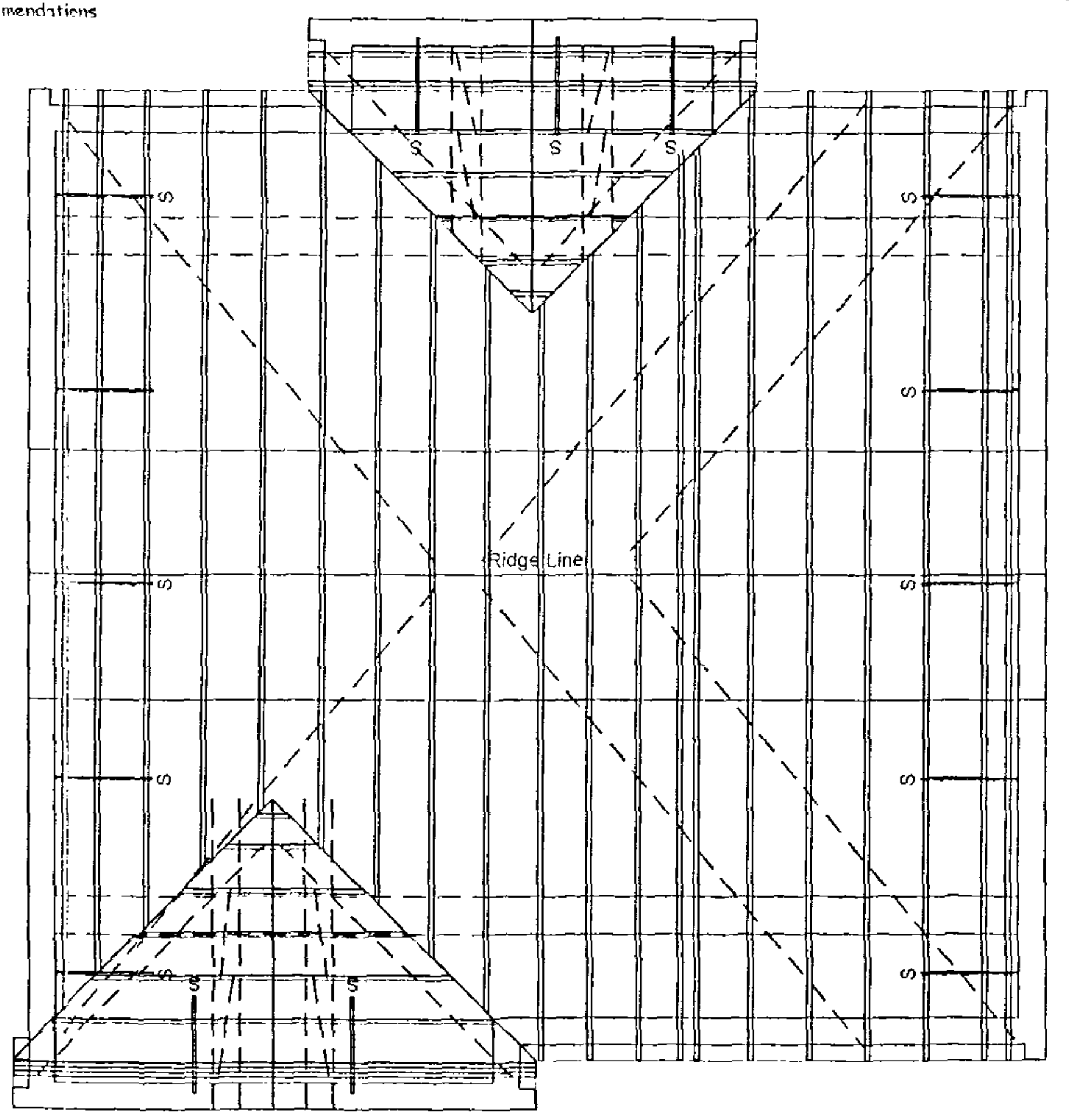
NOTE:MANUFACTURER'S DETAILS & CALCULATIONS TO BE FORWARDED TO SHDC'S BUILDING CONTROL OFFICER FOR APPROVAL AT LEAST 7 DAYS PRIOR TO FIXING ON SITE

Specialist diminishing trusses built off 100 x 22 valley boards with Glass Fibre Valley Troughs.

30x5 m/s straps (S) over 2no. trusses at max 2m ctrs to gable ends and ceiling level. At least 1no gable strap to be within 500mm of ridge.Provide solid noggings under each strap.

Note:Provide 50x50 timber noggings for partition head fixing and pendant light fixings. Position of light fixings to be agreed on site with client

Solid pack void between last rafter and blockwork with mineral fibre insulation and solid timber packs.



Construct dormer windows from 100 x 50 timber framing, 150 x 50 timber joists to form head member.Fix externally 12mm thk exterior grade WBP plywood sheeting ensuring to allow expansion gaps of 3mm at joints.Fix breather membrane to outer face of sheeting.External finish to side of dormer to be agreed on site with client.Solid pack internally with mineral fibre insulation and supply between insulation and p'board a 500 gauge vapour barrier.

Dotted line shows 25 X 100 diagonal and longitudinal wind bracing, and ceiling tie bracing to be free from all major defects and any weak points and fixed all in accordance with manufacturers details.Lap joints (if required) to be taken over 2no.trusses all in accordance with BS5268 Part 3 - 1985.Bracing to be fixed with 2no. 3.35 x 65mm galvanised round wire nails at each cross over and to firmly butt against walls.

Pre - Fabricated Attic Trussed Rafters to Main Bungalow & standard Fink Trusses to kitchen,lounge & Loft space as shown on proposed plan be at max.600mm ctrs .Roof construction to be designed strictly in accordance with BS5268 Part 3 1985 and contractor to ensure trusses are fitted strictly in accordance with specialist manufacturers design drawings & calculations.First and last truss to be fixed 25-50mm from wall.

PROPOSED ROOF PLAN
Not to Scale

PROPOSED INTEGRAL FLOOR JOISTS SPEC'N

Solid herringbone strutting @ mid point to spans over 2m. Strutting at third points to span over 4m.

Provide solid blocking at the ends of herringbone strutting and under straps between last joist and wall.

30x5 m/s anchor straps (S) @ 2m ctrs with solid strutting beneath.Notch straps into minimum 3no. joists and fix with two nails.

SMOKE ALARMS

To be self contained,interconnected and wired to a separately fused circuit with a battery back up.Smoke alarms to be fitted to u/side of plasterboard ceiling to the ground floor max 7m from the kitchen / lounge and to be max. 3m from any bedroom door. All alarms to be strictly in accordance with BS 5446 and to be wired that when one alarm is triggered all alarms are activated.

WASTE SIZES FOR NEW PLUMBING

All new plumbing to have the following waste sizes:
W.C=100mm ø Multikwik or similar approved
W.H.B=32mm ø uPVC with 75mm Deep sealed trap
SINK=40mm ø uPVC with 75mm Deep sealed trap
SHOWER=40mm ø uPVC with 75mm Deep sealed trap
Provide access points to all changes in direction.Provide anti-siphon traps where pipe runs exceed 3m and W.H.B pipe run exceeds 1.8m.

NOGGINGS

Fix min. 38x38mm timber noggings to all potential loose plasterboard ceiling edges and light fittings.Position of light fittings to be advised by client on site.

INTERNAL JOINERY ,SKIRTING & ARCHITRAVES

All internal finished timber to be free from all defects and to clients approval prior to ordering any materials.

ACCESSIBLE SWITCHES & SOCKETS

Inorder to use the dwelling more easily by all persons then wall mounted switches, sockets, TV sockets, telephone jack points and door bells....... etc should be positioned between 450mm and 1200mm from finished floor level.Door bells & light switches to be fitted 1200mm from FFL and the remainder 450mm from FFL.

FOUL DRAINAGE

Underground drains to be as rainwater drainage but with min.1:80 and max.1:40 falls.Fall of drains from gullies to be 1:40.All drains passing thro' walls to have concrete lintel over with 50mm space around filled with compressible material and opening masked with durable rigid sheet to prevent ingress of vermin or back fill.Drain runs must not be any lower than foundation depth unless min.of 1m from any building.Provide roddable access to all change in bends and junctions.Contractor to ensure no live drains run beneath proposed works.

RAINWATER DRAINAGE

uPVC guttering and downpipes to clients approval.Falls for guttering to be 1:600 and brackets fixed at max. 2m ctrs.Downpipes to be connected into underground drains via reducing adapter.Underground drains to be 110mm Ø Osma uPVC or similar approved with flexible joints laid on 100mm peagravel and min 150mm surronds laid to 1:100 falls to new soakaway.Soakaway specification detailed elsewhere.

CEILINGS

All ceilings to be 15mm plasterboard to BS1230.
Ceilings to be have Coving and skim finish to clients requirements.Plasterboard sheets to be fixed with joints staggered and must be layed perpendicular to all joist runs.Fix boards at a min.150mm centres.

ROOF / LOFT ACCESS

Provide insulated roof access trap door with a fully weathered sealed frame and a 38mm brass bolt or to clients requirements.

ELECTRICAL INSTALLATION

All electrical work required to meet the requirements of Part P must be designed, installed, inspected and tested by a person competent to do so. Prior to completion of the works the council Building Control Officiers must be satisfied that either:
1. An electrical installation certificate issued under a competent persons scheme has been issued or
2. An appropriate electrical installation certificate has been issued for the work, and that it has been signed by a person competent to do so.The Engineer is to advise if any appliance or position of appliance does not conform to regulations. Contractor to seek advice from Client with regard to lighting requirements.

NOTICE PLATES FOR HEARTHS & FLUES (Requirement J4)

Information essential to the correct application and use of these facilities should be permanently posted within the dwelling. A notice plate should be provided contiaing the following information:
-The location of the hearth, fireplace or the location of the beginning of the flue
-The category of the flue and generic types of appliances that can be safely accommodated
-The type and size of the flue and the manufacturers name and address details
-the installation date.
The notice plate should be robust and fitted next to the electricity consumer unit.

SOAKAWAYS

All rainwater to discharge into soakaways and to be min.of 5m from any building & a min.of 1m³ filled with rubble to within 450mm of external ground level.Overlay rubble with polythene sheet and backfill with clean topsoil.Note the soakaway inlet pipe must discharge to the centre of the soakaway in all directions.The contractor should carry out percolation tests to determine the feasibility prior to constructing the soakaways. Detailed below is guidance on how to carry out the tests:
1. Excavate a trial pit to the same depth as the anticipated soakaway below the invert of the drain.
2. The trial pit should be 300mm - 1000mm wide and 1000 - 3000mm long.
3.It should have vertical sides trimmed square and, if necessary for stability filled with granular material.
4.When no granular material is used, it is advisable to place pegs into the trial pit at the 75% & 25% levels. This allows the water level readings to be taken accurately.
5.The trial pit should then be filled and allowed to drain three times to near empty, with readings taken for:
-The time taken for the water level to lower to the 75% level
-The time taken for the water level to lower to the 25% level
6.When granular material is used, a full height, perforated, vertical observation tube should be positioned in the pit so that the water levels can be monitored with a dip tape
7.The trial pit should be filled on three separate ocassions to give a true reading on the ground conditions

Available at this office is a Soil Infiltration check sheet to be completed on site and a copy issued to the L.A Building Control Officer upon completion.

CHIMNEY CONSTRUCTION

A chimney height of 4.5m or over is normally sufficient for flue draught. The depth of the chimney foundations should be the same as any adjacent wall foundation. In order to provide stability, masonry chimneys should be bonded to, or supported by, adjoining walls of the building. The masonry should be suitable brick, medium weight blocks or stone and mortar jointed. The minimum wall thickness of a masonry chimney is 100mm or 200mmm to another compartment or dwelling - see ADJ diagram 2.4. Combustibles must be at least 200mm away from the inside face of the flue liner and 40mm from the outside face of the chimney.The chimney should be lined with suitable liners and purpose made bends. Joints should be kept to a minimum and sealed with fire cement. Liner joints should be installed with the tongue pointing downward into the socket to contain moisture and condensate in the flue. Any voids between liners and masonry should be filled in accordance with manufacturer's instructions.A flue liner bend is used to create an offset to align the flue with house walling or to reach a chimney pot position. The number of bends should be kept to a minimum for better draw efficiency and to enable sweeping access. They are also used to prevent vertical rain ingress, but this can also be achieved with a suitable cowl. Where more than two bends at 45 degrees are to be used in a flue, additional sweeping access is required by ADJ 1.48. Bends must not exceed an angle of 45 degrees. A constructional hearth should be made of solid, non-combustible material such as concrete or masonry at least 125mm thick. No combustible material should be placed underneath a constructional hearth unless there is an air space of 50mm or more or the combustible material is at least 250mm below the top of the hearth. A finished/decorative hearth should be at least 12mm thick and made of non-combustible board/sheet material or tiles. For further information refer to ADJ sections 2.22 to 2.29 and 3.40 to 3.42.The fireplace recess should be constructed of solid non-combustible material. Internal solid walls and jambs should be at least 200mm thick and cavity walls should have at least 100mm thick leaves and 50mm cavity. Material in the cavity behind the fireplace should be non-combustible. For an open fire the fireplace recess should be at least 350mm deep. For burning solid fuel, ADJ suggests a minimum recess size of 500mm by 550mm using 200mm diameter liners and a flue cross sectional area of 15% of the face area of the fireplace.The height of an unrestrained chimney stack should not exceed 4.5 times the smallest plan dimension of the chimney stack. Please refer to ADJ section 2.10 and diagram 2.1 for recommended positions of the flue outlet above the roof. Details of clearances above easily ignitable roof coverings, such as thatched roofs, are set out in ADJ 2.12 diagram 2.2.A chimney needs to be made weather proof with mortar flaunching around the chimney pot on a brick or concrete capping with drip overhang. Mortar used for the chimney and flaunching should be resistant to rain and frost.. Lead flashings are needed at the junction with roof tiles and brickwork to prevent water penetration. A saddle tray damp proof course should be installed across the full span of the stack at the intersection with the roof to prevent water seeping down the chimney. Details of lead saddle trays and flashings are available from the Lead Association. Tel: 01892 656463.

FOUNDATIONS

Existing building area to be stripped of all vegetable matter and rubbish to a min.depth of 150mm before excavation commences.Concrete mix for foundations to be GEN3 in accordance with BS5328:1981.foundations to external wall to be min.700mm wide x 225mm deep.Excavate down to solid firm strata i.e 750mm deep (min.1000mm if soil is of a shrinkable nature).Exact depth to suit conditions on site and to the strict approval of the L.A Building Inspector.Any irregularities in subsoil during excavation to be brought to the immediate attention of the Building Inspector & advice to be sought from a Chartered Structural Engineer.

WALLS BELOW D.P.C

1no.Course of Class B brickwork & 2no. courses of Red Engineering brickwork below D.P.C on outer face and 1no.course of 7N/mm2 on inner skin of cavity face.Elsewhere to be either 7N/mm2 concrete blockwork or full width trench blocks.Both to be within 225mm of DPC level.Cavity to be filled to within 225mm min. of below DPC with lean concrete mix.

GROUND FLOOR

65mm mortar screed with a light gauge reinforcing chicken wire on 500 gauge poythene separating layer on a 60mm Celotex Double R GA3000Z rigid insulation board or similar approved, provide 30mm thick perimeter insulation between screed and floor insulation upto d.p.c level on 100mm thick GEN3 concrete sub-floor on a 1200 gauge DPM lapped onto DPC within walls on min.150mm clean and well compacted hardcore.Depth of hardcore must not exceed 600mm and must be compacted in 150mm thick layers.All service entries to be sealed with pressure sensitive tape. Floor to achieve a min 'U' Value of 0.25w/m²K.

Floor Insulation Installation guidelines (under screed)

1. Install a Damp Proof Membrane (DPM) below the slab OR apply a liquid waterproofing material to the top surface of the slab.
2. The DPM must provide continuity with DPCs installed within the surrounding walls.
3. Level the surface of the slab; it should be smooth and free of projections.
4. Use a thin sand blinding on a rough tamped slab to ensure that boards are continuously supported. Cut strips of board as upstands to fit around floor perimeters to eliminate heat bridging at screed edges.
5. Upstand depth should equal the sum of the slab insulation and screed thickness.*
6. The upstand thickness should not exceed the combined thickness of wall plaster and skirtings.
7. Lay boards directly onto the prepared slab cutting infill boards as required. Joints must be tightly butted. The use of a polythene vapour control layer over the insulation is recommended by the BRE to minimise the risk of condensation forming at the insulation/slab interface.
8. Apply a sand/cement screed over the GA3000Z boards to a minimum thickness of 65 mm. Use scaffold boards or other protection to prevent wheelbarrows and other traffic damaging boards.
9. Allow screed to dry thoroughly before an impermeable surface, such as a vinyl floor finish, is applied.
10. These recommendations are suitable for normal domestic floor loadings. If higher loadings are required it may be necessary to increase screed thickness and provide reinforcement within the screed

Installation guidelines (under slab)

Insulation under the slab must have: Level and well blinded hardcore. DPM (Damp Proof Membrane) placed under insulation. Insulated upstand = thickness of slab + screed. DPM contiguous with the DPCs. Vapour control layer (e.g 1000 g polythene) laid directly over insulation.

DAMP PROOF COURSE (D.P.C)

Horizontal heavy duty polythene DPC "Hylead or similar approved to all walls in accordance with BS 6515 and set min.150mm above all external ground levels.DPC in walls must be linked / lapped with DPM in ground floor.Provide performed cavity wall trays above windows & doors with weep vents at a max.of 2m centres with a min.of 2no.per openig.

EXTERNAL WALLS

All external walls to be 275mm overall thickness comprising of:
-100mm Facing Brickwork to be advised
-75mm cavity filled with Crown Dritherm (or equal approved) built in as work progresses.Insulation batts should be kept clean and free from mortar droppings, all joints should be closely butted. Any cutting and fitting should be neatly done and not distort the layers of glass wool which comprise the material. All DPC's should be installed to ensure that penetrating water is directed only to the outer leaf.
-100mm Thermalite Shield insulating blockwork.
Continue wall insulation at least 150mm below top of perimeter floor insulation and support off wall ties.
External wall to achieve a min 'U' value of 0.35w/m²K.

CAVITIES

Close all cavity walls at jambs with Thermabate or similar approved Insulated cavity closers fitted strictly in accordance with manufacturers instructions. Roof insulation to be continuous with wall cavity insulation:Install Insulated Cavity Closers by Thermabate or equal approved, 25mm thick x 75mm wide (to equal cavity width) at jambs and cills of all openings in masonry cavity walls. Secure with the proprietary clips provided at maximum 500mm centres. Ensure that closers fit tightly to each other and to the lintel. The closer at the jamb must completely lap the closer at the cill.

WALL TIES

Stainless steel cavity wall ties to BS1243:1978.To be built into cavity wall as works proceeds and spaced at 750mm centres horizontally,450mm centres vertically and 300mm staggered around all openings.Ensure wall ties are level or at least sloping to the outside leaf.Bed ties a minimum of 50mm into each leaf and ensure wall ties are completely free from mortar droppings.

LINTELS

All lintels to cavity wall to be factory insulated Birtley Supergalv range unless noted otherwise or equalled approved.All lintels must have a min.150mm endbearing and installed in accordance with manufacturer's instructions.Do not allow masonry to overhang lintel by more than 25mm. Note: lintels are not to have a continuous baseplate.

WINDOWS & DOORS

All windows to be White uPVC to clients requirements based on styles shown on elevations.Fit with 4000mm² trickle ventilators to Kitchen, Utility,Bathroom & En-Suite windows and 8000mm² elsewhere all in accordance with manufacturer's recommendations.Patio doors to be fitted with 10000mm² ventilators.Opening vents to give 1/20 th of floor area rapid ventilation to all rooms.All glazing within 800mm of floor level and within 300mm of a door to a height of 1500mm of ground level to have toughened glass in accordance with Section N of the Building Regulations and BS6206 class B.All double glazed units to be installed in accordance with BS 6262 and to have a 16mm Air gap with a soft Low 'E' coating on glass inner pane to achieve a min 'U' value of 2.0 w/m²K.Note all windows to have a perimeter weatherseal both internally and externally and to be fully draught sealed.Provide frosted glass to all Bathroom, W.C's and En-suite windows.Ensure windows & doors are fitted within masonry reveal to overlap cavity closer by min. 40mm to avoid cold bridging.

ROOF FINISH

Concrete Interlocking Double Pantile fixed in accordance with manufacturers instructions and in accordance with BS 5534:Parts 1 and 2.Set out to give true lines and regular appearance, fitting neatly at all edges, junctions and features.Fix roof covering to make the building sound and weathertight at the earliest opportunity.Repair any defects as quickly as practicable to minimise damage and nuisance & keep gutters and pipes free of debris and clean out at completion.Provide 50x25 preservative treated timber battens.Tiling battens should be not less than 1.2m long and continuous over at least 3 trusses.They should be fixed to every rafter member which they cross, or on which they are joined, with nails in accordance with BS5534: Part 1. The ends of the battens should be sawn square and butt jointed centrally on a rafter member so that adequate bearing and nailing can be provided for each end of each batten.Butt joints in battens should be arranged so that not more than one batten in four is joined on any one rafter.Generally all tiles at perimeter of roof to be clipped and nailed. Use Code 4 Lead flashing to any abutments with min.75mm upstand.

ROOF INSULATION - SLOPED CEILINGS (OVER RAFTER APPLICATION)

The whole area of the sloped ceiling to be insulated with 25mm thk Multi Layer Tri Iso Super 9 Insulation to achieve a 'U' value of 0.19w/m²K fitted strictly in accordance with manufacturers instructions:
1. Unroll the insulation preferably vertical, starting from the top of the roof.
2. Staple the insulation product at 500mm ctrs onto the rafters
3. Overlap the widths by min. 50mm and max. 100mm and tape joints with approved tape i.e ISODHESIF ALU Tape.
4 Fix the 25 x 50 timber cross battens, breathable roof underlay, counter battens and 50 x 25 tile battens prior to fixing roof covering as described elsewhere.
Roof Insulation 'U' Value Calculation sheet available on request

ROOF VENTILATION

Install Tyvek® or similar approved Breathable Membrane in accordance with manufacturers instructions which are briefly described below & BBA certificate 90/3635 (fourth issue) breather membranes in non-ventilated pitched roofs of any plan, any shape or any size under all types of roof coverings including tight jointed and fully interlocking tiles and synthetic slates. Installing Tyvek® underlay in accordance with the above certificate will enable a roof to meet all the requirements of the Building Regulations.

Installation Guidelines

Tyvek® SUPRO should be installed with min. 150mm overlaps as a standard bituminous felt underlay and secured with stainless steel staples or large headed galvanised clout nails.

Eaves:

There is no need to provide any vents into the loft at eaves, because a Tyvek® non-ventilated roof system does not rely upon air movement beneath the membrane to avoid damage by condensation.To avoid water ponding behind the fascia of closed eaves and to prevent prolonged exposure of the membrane to ultra-violet radiation, use a Tyvek® Eaves Carrier. Stop the membrane short of the fascia and lap it onto the Eaves Carrier.Pack closed eaves with fibrous insulation to reduce thermal bridging.

Verge detail:

Lap the Tyvek® underlay 50mm onto the gable or flying rafter.

Ridge/ hip detail:

Extend the Tyvek® underlay 150mm from each slope and overlap it at the ridge/ hip line. There is no need to provide vents at the ridge

Valley detail:

Extend the Tyvek® underlay from each slope by 150mm beyond the valley centre line and seal the lap using Tyvek® Butyl Tape to form a watertight seal.

Abutments:

Turn up the Tyvek® underlay beneath flashings not less than 50mm.

Penetrations:

Seal around all penetrations using Tyvek® Butyl Tape.

HEATING SYSTEM

Provide a Low Pressure hot water Central system via Gas Fired Boiler and cylinder complete with fan assisted flue and combustion air vent.Area of vent is to be in strict accordance with manufacturer's recommendations.Boiler to have a SEDBUK rating of 85%.Electrical operated boiler control interlocks are to control the operating periods of the boiler which in turn is controlled by a room thermostat positioned in proposed living room.The boiler should only fire when the space heating or the Cyclinder termostat calls for heat.All radiators are to be fitted with thermostatic radiator valves. The hot water cyclinder is to be insulated with a factory applied PU foam coating at least 35mm thk having a min. density of 35kg/m³. All space heating pipework located outside the building fabric insulation layers to be wrapped with insulation material having a thermal conductivity at 40°C not exceeding 0.035 W/m°K and a thickness equal to the outside diameter of pipe upto max. of 40mm.It should be noted that central heating and hot water pipework in unheated areas may need increased insulation thicknesses for the purpose of protection against frost, refer to BRE Report No. 262 2002 Edition.Oil storage tank should have a hard surface beneath such as concrete of paving slabs at least 42mm thick extending out at least 300mm beyond the perimeter of the tank (or external skin if it is of the integrally bunded type). Depending on location of oil storage tank fire protection may be required see site plan.

COMMISSIONING OF HEATING AND HOT WATER SYSTEM

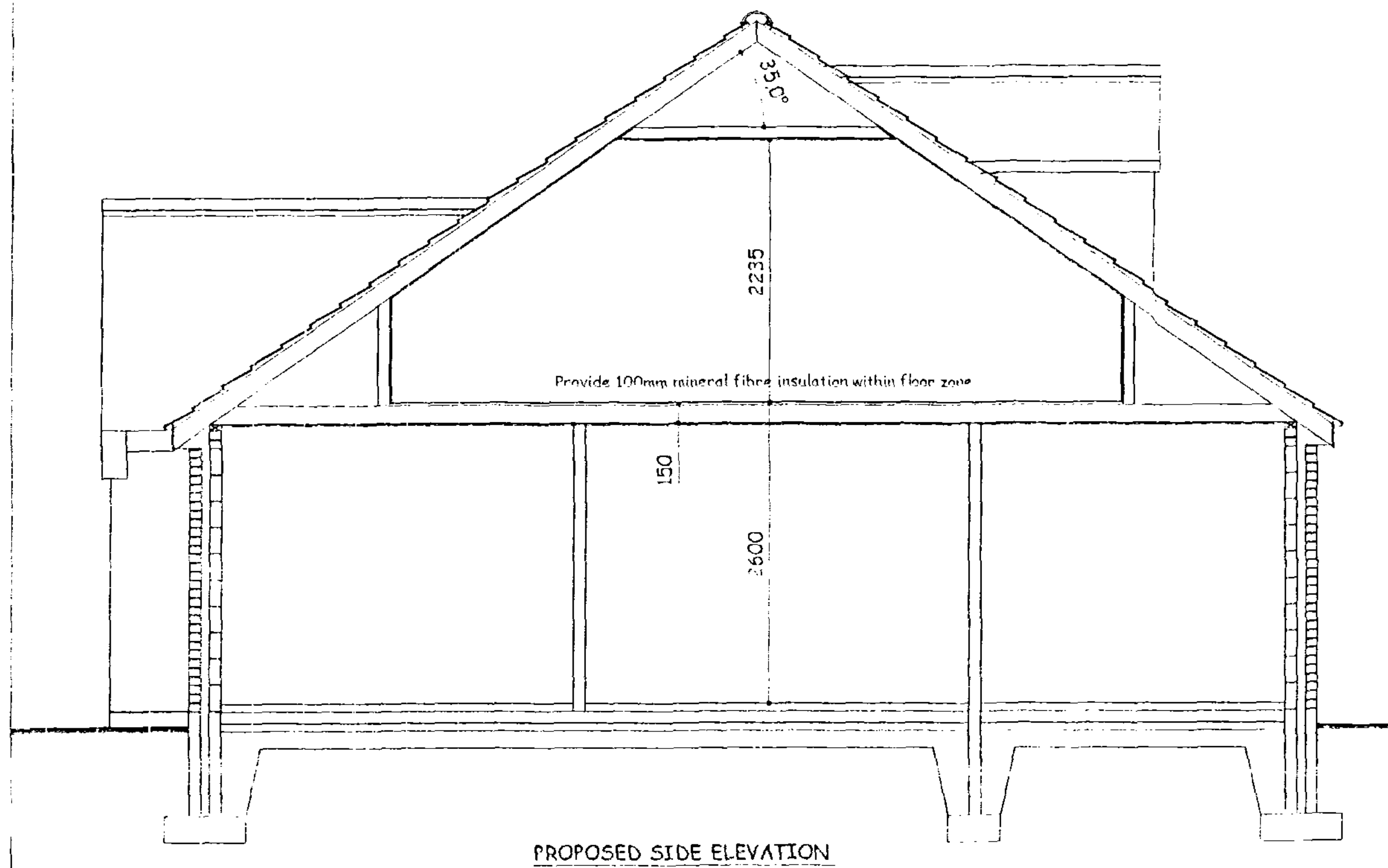
Contractor to submit a certificate to show that commissioning has been successfully carried out. The certificate should be made available to the Client and SHDC building inspectors. A suitable certificate should be one published as part of the Benchmark Code of Practise [illegible] Commissioning and Servicing of Central Heating Systems, a blank copy may be included within the boiler manufacturer installations instructions or from C.H Information [illegible] tel no: 01926 423 284.

LATERAL RESTRAINT STRAPS

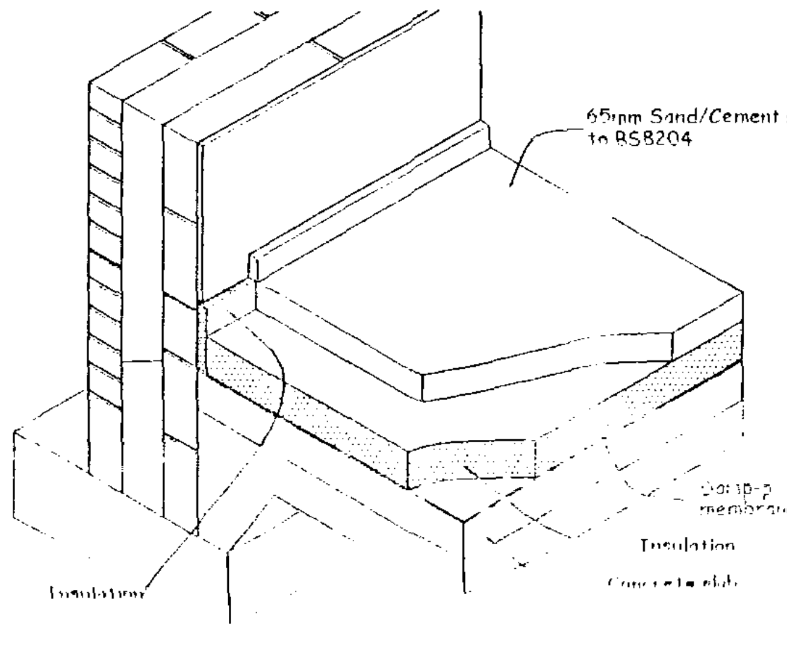
Tie roof structure to blockwork wall with 30X5 galvanised mild steel straps at max 1.8m ctrs where rafters and ceiling joists run parallel to blockwork walls.Also fit at max 1.8m ctrs to anchor wallplate to blockwork wall with min 3no. fixings per strap.Horizontal lateral restraint straps should be spaced at not more than 2m centres and attached to at least 3 timber members through the use of noggings and packing. Attach to timber members with four steel screws or four 4 mm x 75 mm round nails for roofs and two into each joist for floors. The turn down end should be 100 mm at the centre of an uncut block or brick.Vertical restraint strapping should be at least 1m long. Where straps are fixed to masonry hardened nails 8SWG x 75 mm long or wood screws into plugs No.12 x 50 mm long should be used. The number of fixings should be in accordance with the design plans and the lowest fixing should be located within 150 mm of the bottom of the vertical strap.

DETERMINED PLAN

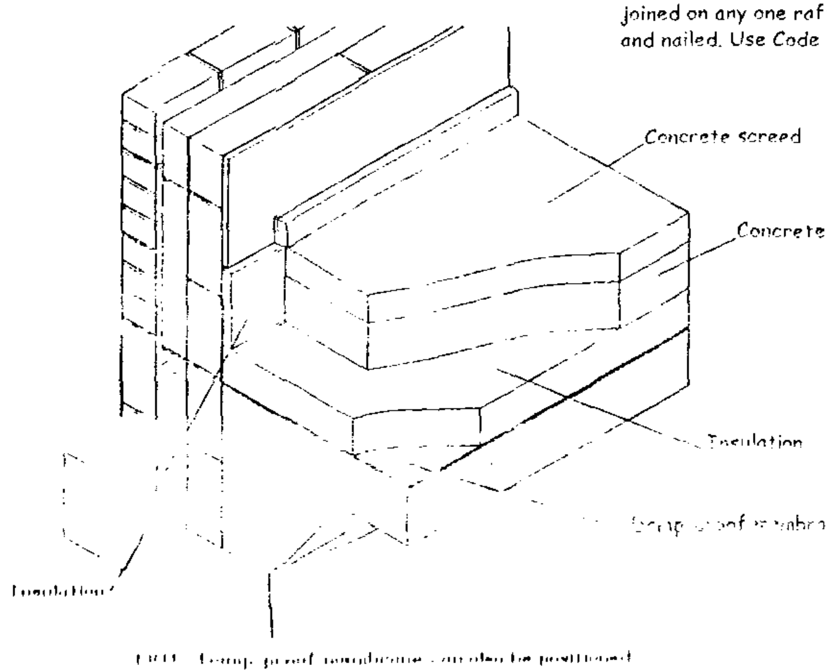
DETERMINED PLAN



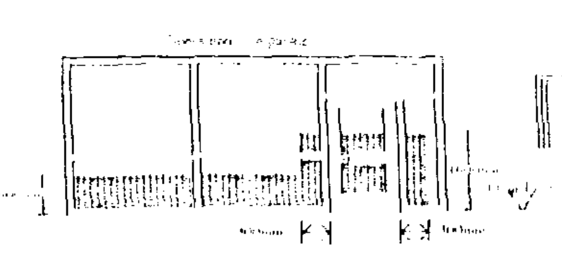
PROPOSED SIDE ELEVATION
Scale 1:50



TYPICAL ISOMETRIC SLAB DETAIL
Insulation above Slab



TYPICAL ISOMETRIC SLAB DETAIL
Insulation below Slab



Shaded areas show existing locations to which requirement fill applies

1 Nov
1504/05

Client :

Mr A Davies
"Long Acre"
105 North Road
Gedney Hill
PE12 0NS

Site :

Replacement Dwelling

remway design Ltd
c/o South Lincs Plant Hire
Enterprise Way
Pinchbeck
Spalding
PE11 3YR
Tel / Fax: 01775 768 9[illegible]
[illegible]

Date: apr05
Scale: As Noted

Drawing No:
rem 1028 - 02