PLOT 17

REFER TO 1004.03.25 FOR DRAINAGE LAYOUT AND SPECIFICATION

CASTLE BUILDING LTD

PROPOSED HOUSING DEVELOPMENT
KING'S ROAD • PINCHBECK ROAD
SPALDING.

Date .FEB 04 Scale 1:50

1004.03:45

CB DESIGN GROUP
ARCHITECTURAL & PLANNING SERVICES
24 Commercial Road
Spalding
Lincolnshire
PE11 2HA
Tel: 01775 722241
Fax: 01775 769986

DETERMINED PLAN
SHDC Planning & Development
15 JUN 2004
Ref: cms2/ed

ROOF CONSTRUCTION

Interlocking concrete tiles min 75mm headlap fixed in accordance with BS 5534 to 50x25mm treated battens, Dupont Tyrek breathable roof membrane laid, fixed and lapped to manufacturers instructions . Attic type trusses by specialist design fixed and braced in accordance with BS5268

U valve to achieve 0.20 w/m2 /k from Celotex handbook using Tuff R GA 3000Z insulation inter and under rafters. Nails fixed to side of rafters to ensure insulation does not encroach on air space GA3090Z 90mm thick Tuff R cut and friction fitted up to stop nails and lateral joints closely butted second layer of GA3045Z 45mm thick board fixed to u/s of rafters with clout nails and joints tightly butted joints sealed with aluminium foil tape as vapour check. 12.5mm plasterboard lining fixed through to underside of rafter joints treated for direct decoration or plaster Skim finish.

Vertical Framing Members - GA3045 Tuff R insulation fixed to 47mm noggings between truss frame members 12.5mm plasterboard fixed to noggings and truss frame.

Upper Ceiling Areas - 250mm total thickness mineral quilt 100mm bottom layer between chords and 150mm layer of difto laid over in opposite direction.

ROOF ANCHORAGE

At Eaves - 100x50mm softwood wall plate anchored at max 2m centres with 30x5mm galvanised straps hooked over plate taken down inner wall face min. 1m and securely fixed to wall.

At Masonry Gables - 30x5mm galvanised straps 1m long fixed along each ceiling binder (at max 2m centres) , built into wall and turned down cavity.

At Gable Verges - Straps required at max 2m centres along each gable verge 30x5mm galvanised straps fixed over 50x50mm softwood noggings between 3 No trussed rafters (or roofing spars).

DORMER CONSTRUCTIONS

Roof covering battens felt as main roof 100x100mm corner posts set off double rafters both sides of dormer opening. 75x47mm softwood rafters and ceiling joists at 400c/cs. Dormer cheeks 100x47mm framing members Celotex TuffR 30002, 90mm thick cut and tightly fitted between 12.5mm Duplex plasterboard lining with intergral vapour barrier. Cheeks faced with No 5 lead on 19mm exterior grade plywood. 250mm total thickness mineral wool insulation quilt over ceiling. 12.5mm plasterboard and skim ceiling Dormer gables 8mm Rockwool, Rockclad . 'Timberfix' system with weatherproof fixings and applied timber rails as shown . Frame gables and ply soffits etc faced with white upvc sections.

EAVES CONSTRUCTION

175mm eaves overhang with white UPVC soffit and fascia system on treated softwood fascia and soffit framing members. 100mm UPVC half round rainwater gutter fixed to manufacturers recommendations.68mm diameter UPVC rainwater pipes in positions shown on the drawings.

FOUNDATIONS

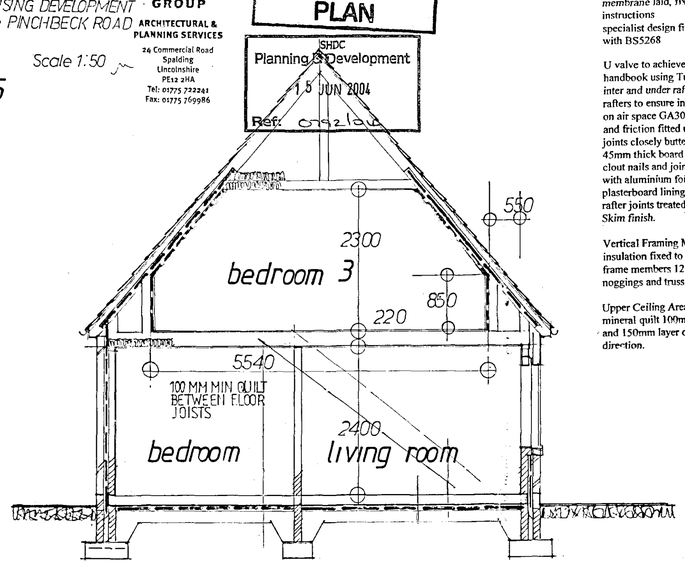
600x225mm and 450x225 under external walls and load bearing internal walls respectively. Reinforcement requirements to be confirmed by Ward Cole, Consulting Engineers. Excavation for foundations in accordance with Ground Investigation report and agreed by Local Authority Building Control prior to laying concrete. Concrete in foundations to be confirmed by Ward Cole Consulting Engineers.

Internal lighting

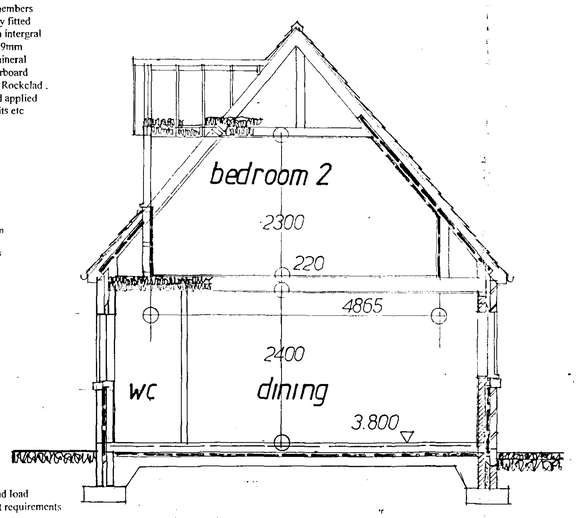
Energy efficient lighting to be installed in accordance with Clause 1.54 of Part L1 in areas where lighting is expected to have most use, special light fittings fitted with lamps having luminous efficiency greater than 40 lumens per circuit-watt. Dwelling to comply with table 4 for method of determining locations of fittings.

External Lighting

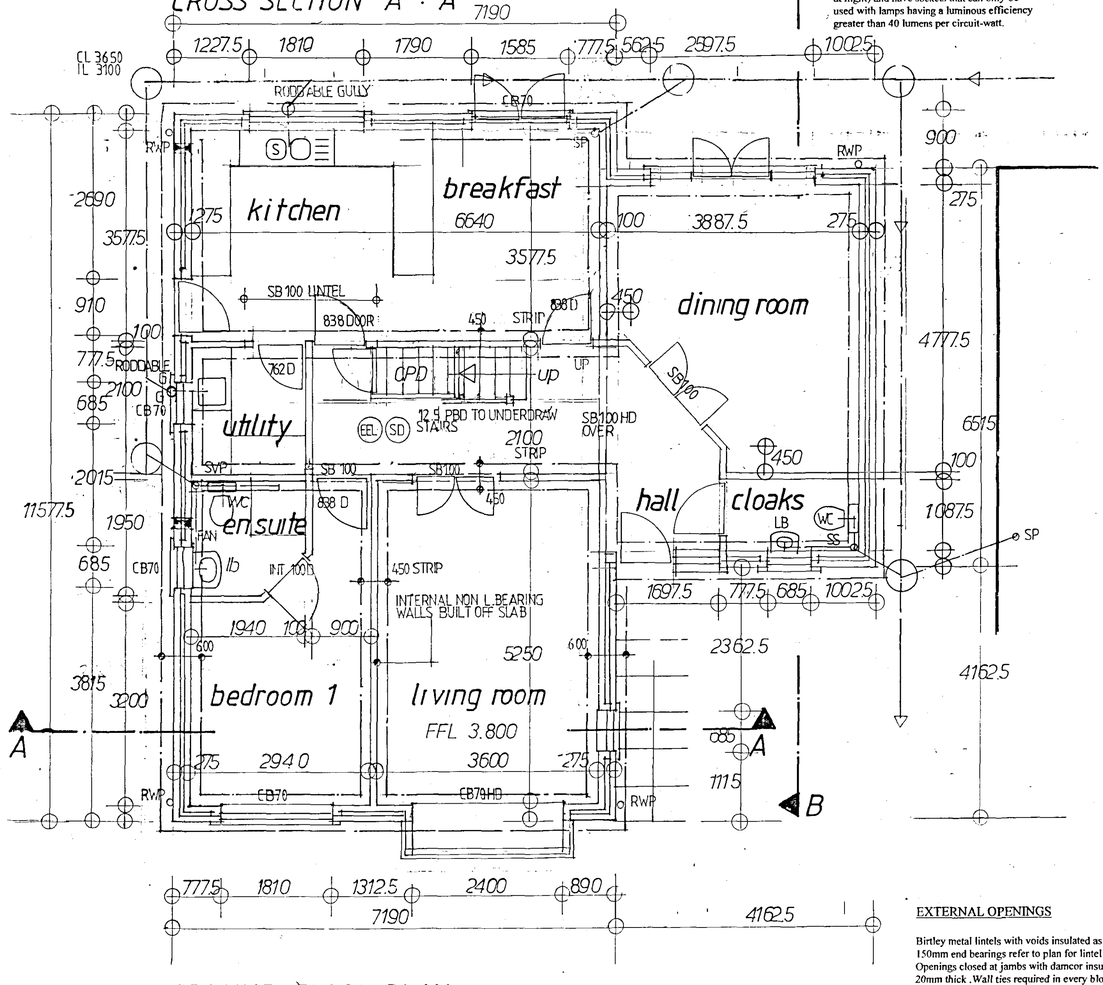
External lighting (including porches) to automatically extinguish when there is enough daylight (or when they are not needed at night) and have sockets that can only be used with lamps having a luminous efficiency greater than 40 lumens per circuit-watt.



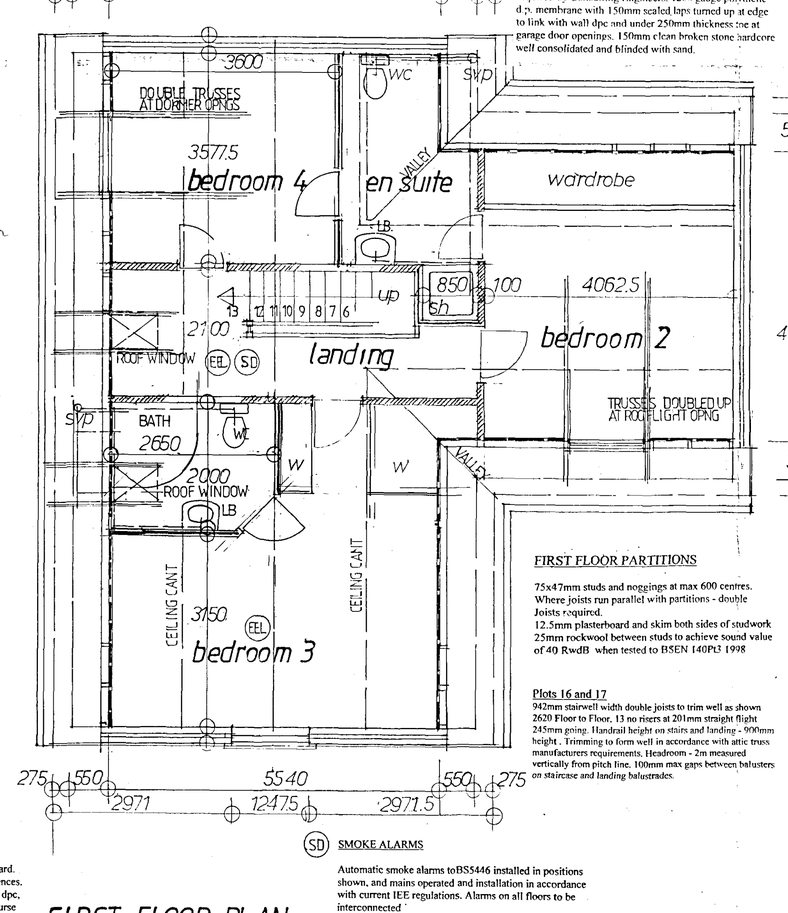
CROSS SECTION A · A



CROSS SECTION B · B



GROUND FLOOR PLAN



FIRST FLOOR PLAN

EXTERNAL OPENINGS

Birtley metal lintels with voids insulated as standard. 150mm end bearings refer to plan for lintel references. Openings closed at jambs with damcor insulating dpc, 20mm thick .Wall ties required in every block course at opening jambs.

FIRST FLOOR PARTITIONS

75x47mm studs and noggings at max 600 centres. Where joists run parallel with partitions - double Joists required.
12.5mm plasterboard and skim both sides of studwork
25mm rockwool between studs to achieve sound value of 40 RwdB when tested to BSEN 140Pt3 1998

Plots 16 and 17

942mm stairwell width double joists to trim well as shown
2620 Floor to Floor, 13 no risers at 201mm straight flight
245mm going. Handrail height on stairs and landing - 900mm height , Trimming to form well in accordance with attic truss manufacturers requirements. Headroom - 2m measured vertically from pitch line. 100mm max gaps between balusters on staircase and landing balustrades.

SD SMOKE ALARMS

Automatic smoke alarms toBS5446 installed in positions shown, and mains operated and installation in accordance with current IEE regulations. Alarms on all floors to be interconnected

FLOOR SLAB

150mm concrete slab Gen 3 mix with reinforced oi required by Consulting Engineers. 1200 gauge polythene d.p. membrane with 150mm sealed laps turned up at edge to link with wall dpc and under 250mm thickness toe at garage door openings. 150mm clean broken stone hardcore well consolidated and blinded with sand.

VENTILATION REQUIREMENTS

Habitable Rooms
Openable window providing rapid ventilation min /20ths of floor area. Background vent provided by trickle ventilators in window heads (Diagram 1 PT F1 of app doc) with min free area of 8000mm2

En suites and Bathrooms
Opening windows providing rapid ventilation trickle ventilators in window heads (Diagram 1 PT F1) min free area of 4000mm2.In addition extract fans installed in positions shown on the plans with fan rate of 15 litres/per sec.

Windowless accommodation - Extractor fans (wall or ceiling duct type as required) providing three air changes per hour with 15 mins overrun after usage . Fans to be operated with lighting circuit 10mm gap provided under door for air inlet.

Utility
Extractor fan - 30 litres per sec extractor rate in position shown.

Kitchens
Opening window for rapid ventilation. Trickle ventilator in window head min 4000mm2 free area. Extract fans- wall mounted type fan rate min 60 litres per second. Where fans are installed in hoods over Cooking hobs minimum extract rate reduced to 30 litres/ per sec.

Gas Appliances
Where boiler and fan are located in the kitchen, wall fan extractor rate to be reduced to 20 litres / per sec . Spillage test in accordance with BS 5440 pt1 Clause 4.3.2.3 to be carried out to determine exact extraction rates required.

Wall Construction

275mm cavity wall construction, 100mm facing brick, 75mm Dritherm insulation, 100mm blockwork , 800 kgm3 density blocks. Wall ties- vertical twist stainless steel - 3 No. per m2 and set staggered. Internal finish -12.5 plasterboard on dabs.

To achieve 'U' valve of 0.35 W/M2K thermal conductivity of Dritherm = 0.03 W/MK.

From table 9 base thickness of insulation is say 102mm.

Reduction of base thickness of insulation.

TABLE A10
Brickwork outer leaf = 5mm
Cavity = 7mm
Plasterboard = 3mm
Air space behind plaster = 4mm

TABLE A11
Aerated concrete blockwork =12mm
Total Reduction = 31mm

Minimum thickness of insulation required to achieve 'U' valve of 0.35 W/M2 is therefore :-

Base thickness less total
Reduction = 102-31 = 71mm

Cavity wall insulation - take down to finish at the same level as the under-side of the floor slab insulation.

Cavity wall insulation to be carried up to the full extent of the gable walls.

Damp Proof Course
Ruberoid 'Permaflex' dpc's (or similar pitch polymer grade) to both leaves of external wall to required widths, and to internal walls at finishes floor level. Dpc lengths to be lapped min. 100mm and suitably bonded. Outer dpc to be a minimum of 150mm above finished ground or paving levels.

Foundation Walls
275mm cavity wall comprising 2/100mm leaves of 7N compressive strenght blockwork with 75mm cavity. BS.1243 wall ties installed at a density of 5 No . per M2 and staggered. Fine concrete fill up to 150mm below lowest dpc. 3 courses of facing brick work below outer dpc level.

Ground Floor Construction

R C slab by Structural Engineer to receive power float finish to receive floor finish. 1200 gauge polythene d p membrane with min laps of 150mm taped and sealed as barrier against methane emissions. D.p.m turned up inner face of slab, and under inner dpc.

If methane gases are present d p membrane to be turned up inner face of floor slab and across cavity and through external wall leaf 2000 gauge polythene cavity tray (continuous) installed over.

100mm rigid polystyrene (HD grade) with taped joints. Minimum 150mm thickness of clean broken stone hardcore well consolidated and blinded with sand to receive insulation selected and compacted fill under hardcore bed as required

Windows Doors and Roof Lights

'U' value of Window, doors and roof lights Glazing in wood or pvc frames not to exceed 2.0 and their area not exceeding 25% of total floor area.

Double Glazing
Glazing in wood or plastic frames - double glazing with 16mm air gap and a soft low-E coating or double glazing with a 12mm air gap are argon filled and a soft low-E coating.

Escape Windows:- Flat Us 13,14 plots 16,17
First floor windows to habitable rooms to have opening lights for escape purpose. At least one window in room to have a opening light with unobstructed area of 0.33m2 and have dimensions not less than 450mm wide and 450mm high. The bottom of the openable area to be between 800 and 1100mm from finished floor level.

Glazing in 'Critical' Location N1
Glazing between finished floor level and 800mm in internal ,external walls and partitions and between FFL and 1.5m in a door, side panel and close to either edge of the door (Diagram 1) to break safely in accordance with BS 6206.

Protection - glazing installed behind permanent screen protection - screen to have min.800mm height and incorporates no gap greater than 75mm.

Limiting Air Leakage
Window and door frames to be pointed all round perimeter internally and externally with proprietary non-setting sealing compound.

SANITARY PIPEWORK

Minimum trap sizes and seal depths bidets/ washbasins 32 dia with 75mm depth seal.

Bath showers - 40 dia. With 50mm depth Seal where connecting direct to gully seal depth required to 38mm.

W.C. pan outlet 100mm dia. 50mm seal depth.

Branch pipes serving single appliances to have same diameter as appliance trap. Common branch pipes to be in accordance with Table 2 part H1.

Branch pipes not to discharge into a stack lower than 450mm above drain invert of the tail of the bend.

Stub and discharge stacks to be 100mm dia. In positions shown on the drawing. Rodding points to be provided to discharge stacks to give access to any inaccessible pipe lengths.Rodding points to be above the spillover level of appliances.

Ventilating stacks to terminate min.900 above first floor window openings within 3m with wire cage or perforated cover. Terminations in areas where rodent control is a problem to be metallic.

Sanitary pipework - to be upvc to BSEN1329 or polypropylene to BSEN1451.

W.C. pipework to be completely sealed through the pipe wall to discourage damage by rodents.

Boiler condensate pipe to be connected to soil stack where applicable with 2.4mm diameter pipe With 75mm depth seal trap.

Part M4 Section 6
A 'level' approach is to be provided to the principal entrance with gradient no steeper than 1 in 20 with surface firm and even and its width not less than 900mm with accessible threshold at the entrance minimum entrance door clear opening min 775mm wide. Clear opening widths of door ways , habitable rooms and cloakroom to be in accordance with table 1 of Part M. Switches and socket outlets for lighting etc. In habitable rooms installed at height between 450mm and 1200mm height from finished floor level.
W.C. provision within the entrance storey Door to open outwards with minimum width in accordance with table 1 and compartment to provide a clear space for wheelchair users to access the w.c. and the wash basin positioned so that it does not impale access in accordance with diagrams 24 and 25 section 10 of approved document M3.

Solid Waste Storage
Residential Developments - Space to be provided for refuse/recyclable waste containers min. capacity of 0.25m3 . Paving to be provided for bins 1.5m2 not exceeding 25m from the collection point or 30m from the dwelling. Refer to layout plan for location. Max gradient of route to collection point - 1:12 with no steps. If steps cannot be avoided -3 no. max permitted along collection route.