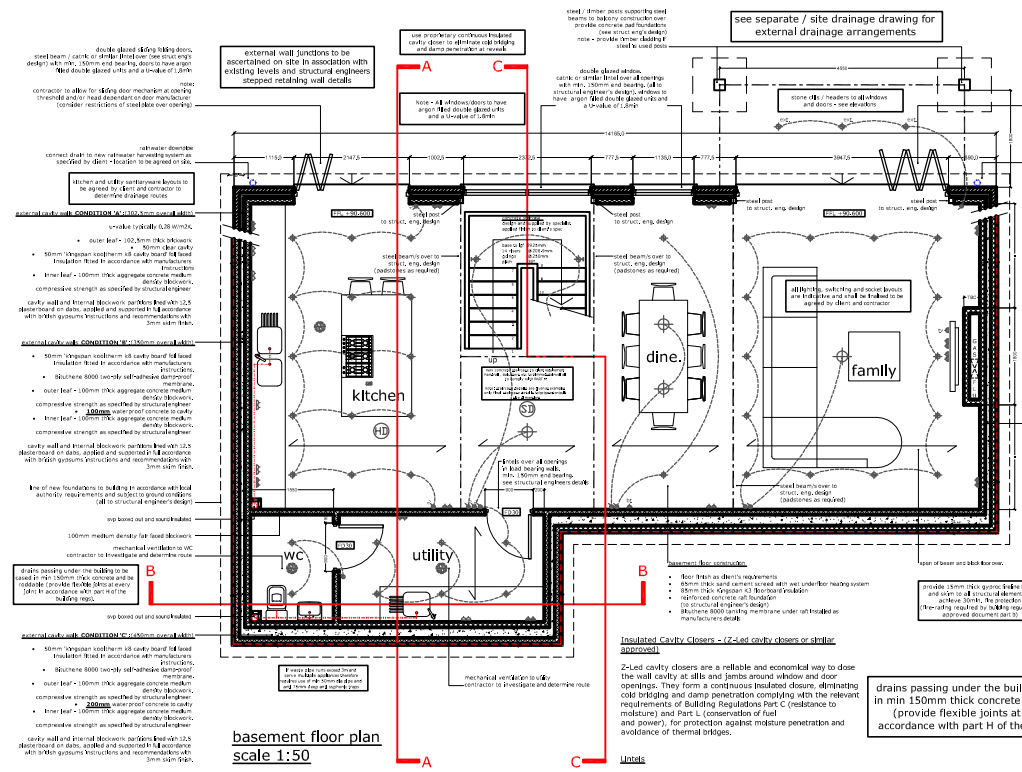

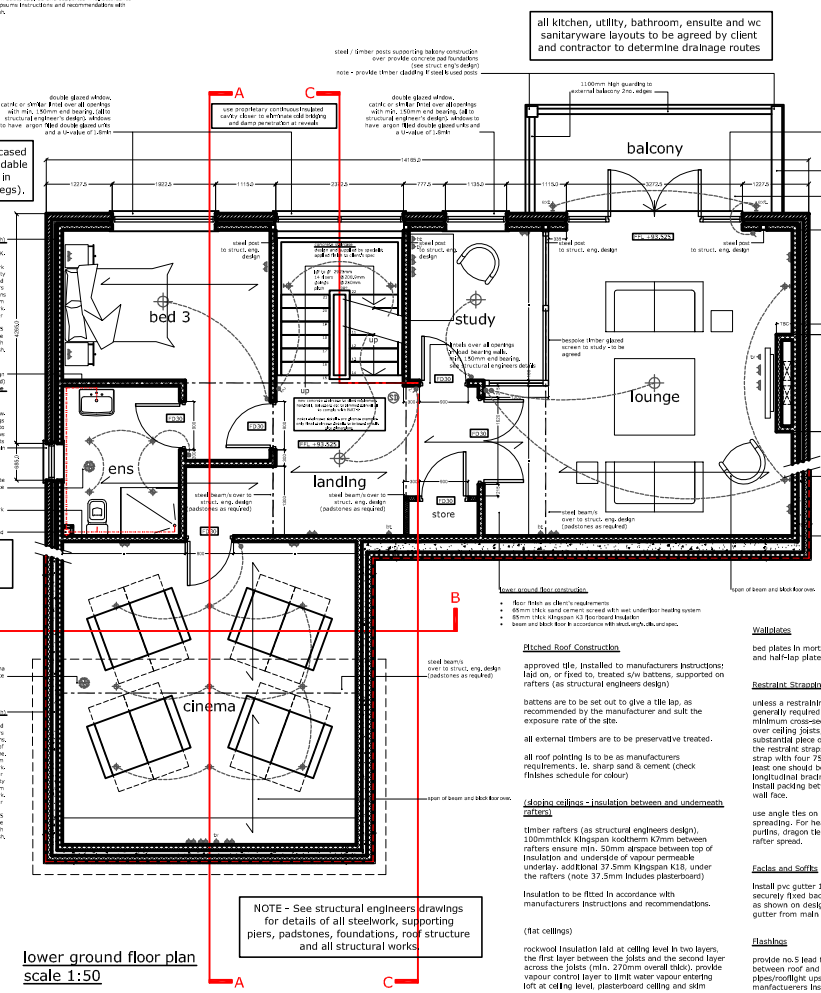

Rev	By	Date	Remarks

arc
design services limited
26A Mizzole Road ~ Hale ~ Altrincham ~ Cheshire ~ WA15 9AD
p: 0161 928 4433 ~ f: 0161 928 4433 ~ e: sales@arcdesignservices.co.uk

PROPOSED NEW DWELLINGS AT 82 & 82A HILLSIDE, QUARRY LANE, KELSALL

Drawing title
PROPOSED BASEMENT AND LOWER GROUND FLOOR PLAN

Status: FOR APPROVAL

Date:	OCT 2009	Scale:	1:50
Drawn:			
Checked:			
Drawing Number:	BR-01	Revision:	_

All levels and dimensions to be checked on site by contractor prior to commencement. Any variations to be reported to the client. This drawing is to be read in conjunction with all others relating to the project and all information delivered accordingly; any anomalies to be reported to the client. Do not scale from this drawing. Use figured dimensions only. Work shown on this drawings to be carried out in accordance with current British Standards and Codes of Practice.

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Basement Floor Construction (reinforced concrete floor slab)

basement floor to be:

- floor finish as client's requirements
- 65mm thick sand cement screed with wet underfloor heating system
- 85mm thick Kingspan K3 floorboard Insulation
- reinforced concrete raft foundation (to structural engineer's design)

tanking membrane:

Bituthene Preprufe tanking to u/s of slab with Bituthene 8000 to concrete walls to basement laid over well compacted hard-core, sand blinded, with joints well lapped and folded to prevent the passage of ground water, the tanking should be brought up the surrounding foundation wall! It is auffidently above the height of the wall damp proof course so that it will connect with or form the dpc all to be installed by specialist subcontractor in strict accordance with manufacturers instructions.

Cavity Walls

Condition 'A'

(302.5mm overall width) u-value typically 0.28 W/m2K.

- outer leaf - 102.5mm thick brickwork
- 50mm clear cavity
- 50mm 'kingspan kooltherm k8 cavity board' foil faced insulation fitted in accordance with manufacturers Instructions
- Inner leaf - 100mm thick aggregate concrete medium density blockwork. compressive strength as specified by structural engineer

cavity wall and internal blockwork partitions lined with 12.5 plasterboard on dabs, applied and supported in full accordance with british gypsums Instructions and recommendations with 3mm skim finish.

Design Standards

BS 5628: Part 1: 1992 (Code of practice for use of masonry. Structural use of unreinforced masonry) and Part 2: 2000 (Code of practice for use of masonry. Structural use of reinforced and prestressed masonry) should be consulted regarding the construction of insulated cavity walls.

Cavity Wall Insulation

The wall Insulation shall be Kingspan Kooltherm® K8 Cavity Board 50mm thick comprising a CFC-free rigid phenolic insulation core with low emissivity composite foil facings on both sides manufactured to BS EN ISO 9002: 1994 by Kingspan Insulation Limited and shall be applied in accordance with the instructions issued by them.

Wall Ties and Retaining Clips

Wall ties should have a retaining clip for securing the insulant to the masonry plane and be of a double drip type. Ideally they should be BBA approved and conform to BS 1243: 1978 (Specification for metal ties for cavity wall construction).

Kingspan Kooltherm® K8 Cavity Board is normally held in position by the wall ties used to tie the two skins of masonry together, using retaining clips. Walls are constructed in the conventional manner but with the first run of wall ties at least one course below the damp-proof course and at approximately 600 mm horizontal centres. A section of the inner or outer leaf of the wall is built up to the course below the next run of the wall ties which are situated at a spacing of 450 mm vertically and 900 mm horizontally.

The Kingspan Kooltherm® K8 Cavity Board boards are then placed in position behind the retaining clips on the wall ties. additional wall ties and clips are used to retain the top of the board. Additional ties may also be required at corners, junctions and cut board ends. Each board should be secured by a minimum of three retaining clips. The boards should form a reasonable butt jointed row. The other leaf is then built up to the level of the top of the boards and construction proceeds.

Lintels

refer to structural engineers design for new lintel locations and specification. proprietary lintels are to be placed over all opening doors, windows, meter boxes. lintels are to be laid level, and have a minimum end bearing of 150 and cased internally to give 1/2hr fire protection. minimum galvanised finished steel lintels. insulated with polystyrene, are to be used in the external walls. cavity trays to be provided over all external openings or required by lintel manufacturer. where full fill cavity insualtion is used all lintels & cavity trays must have stop ends.

Cavity Trays

provide cavity trays to all abutments.

bed cavity trays on mortar as work proceeds.observe usual codes of practice and standards. Incorporate weepvents as required eg.minimum of 2 per cavity tray length.

provide cavity wall weep. to provide an outlet drain to discharge water from tray. Also ventilator as required to ventilate wall cavities.

Internal Load Bearing Walls

load bearing blockwork walls to have footings as indicated by structural engineer. dpcs to be provided.

external walls and internal block partitions lined with 12.5 plasterboard on dabs, applied and supported in full accordance with british gypsums Instructions and recommendations with 3mm skim finish.

Cavity Walls

Condition 'B'

(350mm overall width)

- 50mm 'kingspan kooltherm k8 cavity board' foil faced insulation fitted in accordance with manufacturers Instructions.
- Bituthene 8000 two-ply self-adhesive damp-proof membrane.
- outer leaf - 100mm thick aggregate concrete medium density blockwork. compressive strength as specified by structural engineer
- **100mm** waterproof concrete to cavity
- Inner leaf - 100mm thick aggregate concrete medium density blockwork. compressive strength as specified by structural engineer

cavity wall and internal blockwork partitions lined with 12.5 plasterboard on dabs, applied and supported in full accordance with british gypsums Instructions and recommendations with 3mm skim finish.

Cavity Walls

Condition 'C'

(450mm overall width)

- 50mm 'kingspan kooltherm k8 cavity board' foil faced insulation fitted in accordance with manufacturers Instructions.
- Bituthene 8000 two-ply self-adhesive damp-proof membrane.
- outer leaf - 100mm thick aggregate concrete medium density blockwork. compressive strength as specified by structural engineer
- **200mm** waterproof concrete to cavity
- Inner leaf - 100mm thick aggregate concrete medium density blockwork. compressive strength as specified by structural engineer

cavity wall and internal blockwork partitions lined with 12.5 plasterboard on dabs, applied and supported in full accordance with british gypsums Instructions and recommendations with 3mm skim finish.

Insulated Cavity Closers - (Z-Led cavity closers or similar approved)

Z-Led cavity closers are a reliable and economical way to dose the wall cavity at sills and jambs around window and door openings. They form a continuous insulated closure, eliminating cold bridging and damp penetration complying with the relevant requirements of Building Regulations Part C (resistance to moisture) and Part L (conservation of fuel and power), for protection against moisture penetration and avoidance of thermal bridges.

General Items

All workmanship and materials to comply with Building Regulations. British Standards. Codes of Practice, Robust Construction Details and LA Inspector requirements. All materials to be fixed, applied or mixed in accordance with manufacturers Instructions or specification. All materials to be suitable for their purposes. All works to be carried out to the satisfaction of the 'Inspector' whether or not indicated on any of the drawings.

all dimensions to be checked on site before manufacture.

any discrepancy between this drawing site conditions and information provided by others to be brought to the attention of the client without delay.

party wall act: the client must satisfy themselves that the boundaries shown on the plan are correct. In the event of a boundary dispute the client will be required to meet all costs.

Ground Works

should any of the following conditions occur, reference must be made to obtain the Structural Engineer's advice.

1. Presence of trees either on or around site .
2. Presence of ponds and/or streams.
3. Knowledge of, or discovery of, tipped or waste materials.
4. Knowledge of, or discovery of, old mine or quarry workings.
5. Ground slopes greater than 1:10.
6. Steps in foundations exceeding 175.

NB. Do not attempt to amend or adjust details without expert advice.

Foundations

lay foundations all in accordance with structural engineer's designs and specifications following site investigation report. all to be in agreement with local authority.

new foundation must not extend beyond existing boundary.

Suspended Lower Ground, Ground and First Floor Construction

- floor finish as client's requirements
- 65mm thick sand cement screed with wet underfloor heating system
- 85mm thick Kingspan K3 floorboard Insulation
- beam and block floor

all to be installed in accordance with manufacturers Instructions.

Collier Henry W150T beam and block floor or similar approved (to be confirmed by structural engineer)

general product information

Infill blocks
the standard Infill block is a solid. 1950kg/m3 dense 440 x 215 x 100mm, manufactured to bs6073, part 1 1981, with a compressive strength of 7.0 n/mm2. lightweight blocks can be used if required.

carrying partitions
lightweight partitions can be carried on infill blocks. where required extra beams are needed to support heavier partitions.

floor finishes
a variety of floor finishes can be applied, the most common being either a sand and cement screed or a lightweight floating finish.
where flooring is to be used in garages, and in other applications where the floor may be prone to heavy point loads, it will be necessary to apply a reinforced concrete screed utilising a98 mesh or similar.

tolerances:
beams have an upward camber of approximately 1/300th of the span. a small variation may exist, in particular when beams of notably different lengths are used.

bearings:
beams are normally supported on a 100mm minimum brick or blockwork, or a minimum or 75mm on steelwork.
where ledger angles are used the tops of the beams can be notched to fit neatly under the main steelwork.
on intermediate walls/steelwork the beams can be staggered. however, in certain circumstances, it may be economically advantageous to increase the width of intermediate walls to 215mm avoiding the need to stagger.

fire resistance:
floors should have at least one hour fire resistance.

handling / installation:
joists should be set out carefully using infill blocks to acheive the correct spacing in accordance with the supplied layout drawing. It is good practice to grout the floor after installation to prevent movement of infill blocks. If it is necessary to stack beams on site, these should be supported near to their ends with sides placed directly one above another.
beams should be lifted at points near to the ends and kept upright

SERVICES KEY

- recessed low voltage downlight
- wall light
- drop pendant light fitting
- fluorescent light
- light switch
- light switch - 2 way
- light switch - 3 way
- external light fitting
- 13 amp socket - 450mm above floor level
- 13 amp socket - above / below fitting
- 13 amp (4th socket - 450mm above floor level
- 13 amp (4th socket - above / below fitting
- tv aerial socket - 450mm above floor level
- telecom socket - 450mm above floor level
- cooker control unit with 13 amp socket
- electrical extract fan ducted to fresh air
- mains electric smoke detector - battery maintained
- radiator location - new radiator locations noted
- new boiler location

Stud Partitions

provide 100mm wide stud partitions to first floor area where indicated using 75 x 50mm timber studs at 600mm max c/s with head and sole plate securely fixed to floor and ceiling. fit partitions with rockwool insulation.

where new stud walls run parallel to existing and new joists span provide additional joist to provide double up joists below stud walls.

partitions lined with 12.5 plasterboard, applied and supported in full accordance with british gypsums Instructions and recommendations with 3mm skim finish.

Pitched Roof Construction

approved tile, installed to manufacturers instructions; laid on, or fixed to, treated s/w battens, supported on rafters (as structural engineers design)

battens are to be set out to give a tile lap, as recommended by the manufacturer and suit the exposure rate of the site.

all external timbers are to be preservative treated.

all roof pointing is to be as manufacturers requirements, ie. sharp sand & cement (check finishes schedule for colour)

(sloping ceilings - insulation between and underneath rafters)

timber rafters (as structural engineers design), 100mmthick Kingspan kooltherm K7mm between rafters ensure min. 50mm airspace between top of insulation and underside of vapour permeable underlay: additional 37.5mm Kingspan K18, under the rafters (note 37.5mm includes plasterboard)

Insulation to be fitted in accordance with manufacturers instructions and recommendations.

(flat ceilings)

rockwool Insulation laid at ceiling level in two layers. the first layer between the joists and the second layer across the joists (min. 270mm overall thick). provide vapour control layer to limit water vapour entering loft at ceiling level. plasterboard ceiling and skim

Wallplates

bed plates in mortar, to line and level use minimum timber length of 3m and half-lap plates at joints and corners.

Restraint Strapping to Roofs

unless a restraining form of gable ladder is used, restraint straps are generally required at both rafter and ceiling levels. use straps with a minimum cross-section of 30mm x 5mm. fix straps under rafters and over ceiling joists, ensure the turn-down of the strap is over a substantial piece of masonry and tight against it. Install noggings under the restraint straps. fix straps to a minimum of three trusses. fix each strap with four 75mm nails or screws - at least one should be in the third rafter, alternatively, fix straps to the longitudinal brading. provided straps are at centres not exceeding 2m. Install packing between the end truss and the wall face.

use angle ties on hipped roof corners to prevent the wall plates spreading. For heavily loaded hip rafters, e.g. where they are carrying purlins, dragon ties or similar brading should be used to prevent hip rafter spread.

Facias and Soffits

Install pvc gutter 125 half round to eaves and 75mm downpipes, securely fixed back to roof and external walls to give overhang to roof as shown on design details. ensure breathable membrane turns into gutter from main roof in accordance with manufacturers Instructions.

Flashings

provide no.5 lead flashings & stepped flashings at all intersections between roof and external walls on abutments/protruding s&v pipes/rooflight upstands,etc. all installed in strict accordance with manufacturers Instructions.