DETAIL 01 — MASONRY CAVITY WALL / SUSPENDED CONCRETE GROUND FLOOR JUNCTION - RENDERED BLOCKWORK - STANDARD GROUND LEVEL

MC - GF & DPC #1

Nominal floor U value = 0.1 W/m²K
Ψ_{floor} = 0.065 W/m·K
Construction accords with LABC Construction Detail Reg: E5MCFF10
Nominal wall U value in the range = 0.19-0.28 W/m²K

Photographic evidence will be required for this construction

- 75mm D49 mesh reinforced screed, on
- 150mm Kingspan K3 phenolic foam insulation, on
- Visqueen vapour barrier, on
- Visqueen Eco Membrane DPM, linked to DPC's, on Proprietary beam and block floor by specialist
- Min 225mm void below floor beams.
- 12.5mm BG Wallboard 10 on plaster dabs. Continuous plaster ribbon around boar edges and at reveals.
- Visqueen Zedex DPC cavity tray over air bricks, lapped with the DPC
- Visqueen Zedex housing grade wide DPC
- Visqueen Zedex housing grade DPC to project min 50mm beyond pointing.
- Glydvale MV650 weep vent at 450mm c/cs, min 2No per tray
- 6mm polysulphide mastic seal
- 25mm Kingspan K3 edge insulation around floor perimeter. Min R = 1.12 m²K/W
- Glydvale MV250 airbricks at 2025mm c/cs, min 75mm diameter, periscope duct as required
- External finish as spec
- 80mm PS concrete lintel over periscope vent
- Fill cavity with lean mix concrete

- 100mm medium density blockwork with a min density of 1050 kg/m³
- Cavity filled with Dritherm 32 Ultimate mineral wool cavity bats
- 100mm medium density blockwork with a min density of 1050 kg/m³
- 20mm 3 coat sand and cement render

External Cavity walls (general provisions)

All walls below ground to be in 100mm dense concrete blockwork to BS 6073 1981 Class 2 sulphate resistance - minimum 7N/mm or semi-engineering brickwork set in 1:3 cement / sand mortar. Cavity to be filled to within 225mm of top of slab level with lean mix concrete.

Provide min. 65mm deep precast concrete lintels over all services/drainage pipes passing through walls. Gap of 50mm to be maintained around services/pipes and gap masked by rigid sheet material to prevent ingress of vermin.

Wall containing external face brickwork shall be constructed generally with weather struck mortar joints. Recessed joints shall not be used.

Movement joints and/or bed joint reinforcement are to be provided in accordance with structural engineers / block manufacturer's requirements, using 200x30x5 stainless steel ties with de-bonding sheath at one end in alternate courses. Movement joints shall be continued through render finishes.

For cavities up to 100mm wide, 225mm wide stainless steel double triangle or vertical twist ties to BS EN 845-1:2003 are to be provided between leaves at max 750mm horizontal centres and max 450mm vertical centres, staggered. At reveals, wall ties are to be provided at 225mm vertical centres. Cavites of 150mm wide, shall be provided with 275mm wide suitable ties such as Anchors ST1 or Teplo 2 low thermal conductivity ties at the above vertical and horizontal centres, unless otherwise specified by the Structural Engineer. Where low thermal conductivity ties are specified they should not be substituted without reference to BRD Tech Ltd, as this may adversely affect the U value of the wall construction.

To avoid cold bridging no brickwork is to be built into the inner leaf. Where coursing is necessary, coursing blocks are to be used.

The new external walls shall be adequately sealed at their junctions with walls, floors, partitions and other walls with proprietary filler, to prevent unwanted air infiltration.

Foundation
New foundations are to be in accordance with the Structural Engineers design and details.

Suspended Ground Floor (General Provisions)
The floor beams are to be bedded on a DPC. A minimum void of 225mm must be maintained below the lower surface of the beams or more if specified on the drawings. Edge blocks as supplied by the manufacturer shall be used where required and all blocks should be adequately grouted.

The sub-floor void shall be effectively ventilated by incorporating airbricks or similar spaced on two opposing external walls so as to provide clear areas of 1500mm²/2 m run. Provide telescopic ducts as required and allow for a 65mm pre stressed plank lintel to the inner leaf and a cavity tray over the air brick. Any intermediate supporting walls in the void shall be perforated to allow cross flow ventilation. Any pipes needed to carry ventilation air shall be at least 100mm in diameter.

Seal the structure around any services, ducts or drainage pipes penetrating the floor. Provide proprietary sealing collars around large diameter pipes, bonded to the polythene DPM.

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE OTHER BUILDING REGULATIONS DRAWINGS

DETAIL 02 — MASONRY CAVITY WALL / SUSPENDED CONCRETE GROUND FLOOR JUNCTION - RENDERED BLOCKWORK - LEVEL ACCESS GROUND LEVEL

MC - GF & DPC #2

Nominal floor U value = 0.1 W/m²K
Ψ_{floor} = 0.065 W/m·K
Construction accords with LABC Construction Detail Reg: E5MCFF10
Nominal wall U value in the range = 0.19-0.28 W/m²K

- 75mm D49 mesh reinforced screed, on
- 150mm Kingspan K3 phenolic foam insulation, on
- Visqueen Eco Membrane DPM, linked to DPC's, on Proprietary beam and block floor by specialist.
- Min 225mm void below floor beams.
- 12.5mm BG Wallboard 10 on plaster dabs. Continuous plaster ribbon around boar edges and at reveals.
- Visqueen Zedex housing grade wide DPC
- Visqueen Zedex housing grade DPC wraped up cavity blockwork
- 6mm polysulphide mastic seal
- 25mm Kingspan K3 edge insulation around floor perimeter. Min R = 1.12 m²K/W
- Glydvale MV250 airbricks at 2025mm c/cs, min 75mm diameter, periscope duct as required
- Min 150mm lap sealed with Visqueen double sided tape
- Continue insulation to 225mm below top of slab
- 80mm PS concrete lintel over periscope vent
- Fill cavity with lean mix concrete

- 100mm medium density blockwork with a min density of 1050 kg/m³
- Cavity filled with Dritherm 32 Ultimate mineral wool cavity bats
- 100mm medium density blockwork with a min density of 1050 kg/m³
- 20mm 3 coat sand and cement render

External Cavity walls (general provisions)
All walls below ground to be in 100mm dense concrete blockwork to BS 6073 1981 Class 2 sulphate resistance - minimum 7N/mm or semi-engineering brickwork set in 1:3 cement / sand mortar. Cavity to be filled to within 225mm of ground level with lean mix concrete.

Provide min. 65mm deep precast concrete lintels over all services/drainage pipes passing through walls. Gap of 50mm to be maintained around services/pipes and gap masked by rigid sheet material to prevent ingress of vermin.

Wall containing external face brickwork shall be constructed generally with weather struck mortar joints. Recessed joints shall not be used.

Movement joints and/or bed joint reinforcement are to be provided in accordance with structural engineers / block manufacturer's requirements, using 200x30x5 stainless steel ties with de-bonding sheath at one end in alternate courses. Movement joints shall be continued through render finishes.

For cavities up to 100mm wide, 225mm wide stainless steel double triangle or vertical twist ties to BS EN 845-1:2003 are to be provided between leaves at max 750mm horizontal centres and max 450mm vertical centres, staggered. At reveals, wall ties are to be provided at 225mm vertical centres. Cavites of 150mm wide, shall be provided with 275mm wide suitable ties such as Anchors ST1 or Teplo 2 low thermal conductivity ties at the above vertical and horizontal centres, unless otherwise specified by the Structural Engineer. Where low thermal conductivity ties are specified they should not be substituted without reference to BRD Tech Ltd, as this may adversely affect the U value of the wall construction.

To avoid cold bridging no brickwork is to be built into the inner leaf. Where coursing is necessary, coursing blocks are to be used.

The new external walls shall be adequately sealed at their junctions with walls, floors, partitions and other walls with proprietary filler, to prevent unwanted air infiltration.

Foundation
New foundations are to be in accordance with the Structural Engineers design and details.

Suspended Ground Floor (General Provisions)
The floor beams are to be bedded on a DPC. A minimum void of 225mm must be maintained below the lower surface of the beams or more if specified on the drawings. Edge blocks as supplied by the manufacturer shall be used where required and all blocks should be adequately grouted.

The sub-floor void shall be effectively ventilated by incorporating airbricks or similar spaced on two opposing external walls so as to provide clear areas of 1500mm²/2 m run. Provide telescopic ducts as required and allow for a 65mm pre stressed plank lintel to the inner leaf and a cavity tray over the air brick. Any intermediate supporting walls in the void shall be perforated to allow cross flow ventilation. Any pipes needed to carry ventilation air shall be at least 100mm in diameter.

Seal the structure around any services, ducts or drainage pipes penetrating the floor. Provide proprietary sealing collars around large diameter pipes, bonded to the polythene DPM.

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE OTHER BUILDING REGULATIONS DRAWINGS

DETAIL 03 — MASONRY CAVITY WALL / DOOR CILL, HEAD AND JAMB JUNCTIONS - RENDERED BLOCKWORK - LEVEL THRESHOLD - TIMBER ENTRANCE DOOR

MC - DOOR #2

Nominal wall U value in the range = 0.19-0.28 W/m²K
Ψ_{lintel} = 0.05 W/m·K
Construction accords with LABC Construction Detail Reg: E2MCFF1

A - HEAD
- 20mm 3 coat sand and cement render
- 100mm medium density blockwork with a min density of 1050 kg/m³
- Cavity filled with Dritherm 32 Ultimate mineral wool cavity bats
- 100mm medium density blockwork with a min density of 1050 kg/m³
- 12.5mm BG Wallboard 10 on plaster dabs. Continuous plaster ribbon around boar edges and at reveals.
- Visqueen Zedex DPC cavity tray over wall bricks, lapped with the DPC
- Glydvale MV650 weep vent at 450mm c/cs, min 2No per tray
- Vapour barrier
- Reveal board fixed with continuous bed of adhesive
- 6mm polysulphide mastic seal
- Timber entrance door as spec
- Catnic Thermally broken lintel, sized in accordance with the structural engineers details
- First row of pavior blocks laid in soldier course in polymer modified mortar to support drain
- 6mm polysulphide mastic seal
- SS frame to be plugged and screwed to inner leaf
- SS bellcast render stop over window opening

B - CILL
- 75mm D49 mesh reinforced screed, on
- Visqueen vapour barrier, on
- 150mm Kingspan K3 phenolic foam insulation, on
- Visqueen Eco Membrane DPM, linked to DPC's, on Proprietary beam and block floor by specialist.
- Min 225mm void below floor beams.
- 6mm polysulphide mastic seal
- Concrete bedding to cill
- 18mm floor covering as spec or transition strip
- Visqueen Zedex housing grade DPC
- Min 150mm lap sealed with Visqueen double sided tape
- 45x142 Synthetic level threshold
- Multi part weather bar max 15mm above external finished surface
- ACO Donway drain set adj level threshold cill. Install in accordance with ACO details

C - JAMB
- Reveal board fixed with continuous bed of adhesive
- Timber entrance door as spec
- 12.5mm BG Wallboard 10 on plaster dabs. Continuous plaster ribbon around boar edges and at reveals.
- Cavity filled with Dritherm 32 Ultimate mineral wool cavity bats
- Visqueen Zedex DPC cavity tray over lintel, extending 150mm beyond each end
- Catnic Thermally broken lintel, sized in accordance with the structural engineers details
- Thermabate insulated cavity closer tied back to inner leaf
- Suitable wall ties at 225mm vertical centres at reveal
- Polymer modified mortar surround to drain and bed to first block/slab
- Bottom outlet to ACO Donway drain connected to the SW drainage system
- DPC dressed down well behind ACO drain
- Granular bed to paving as spec
- Cavity with lean mix concrete to support floor insulation in reveal

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE OTHER BUILDING REGULATIONS DRAWINGS

DETAIL 04 — MASONRY CAVITY WALL / WINDOW CILL, HEAD AND JAMB JUNCTIONS - RENDERED BLOCKWORK - TIMBER CASEMENT WINDOWS

MC - WIN #2

Nominal wall U value in the range = 0.19-0.28 W/m²K
Ψ_{lintel} = 0.05 W/m·K

A - HEAD
Construction accords with LABC Construction Detail Reg: E2MCFF1

- 20mm sand and cement render with a min density of 1050 kg/m³
- 100mm medium density blockwork with a min density of 1050 kg/m³
- Cavity filled with Dritherm 32 Ultimate mineral wool cavity bats
- 12.5mm BG Wallboard 10 on plaster dabs. Continuous plaster ribbon around board edges and at reveals.
- Catnic Thermally broken lintel, sized in accordance with the structural engineers details
- Visqueen Zedex DPC cavity tray over lintel, extending 150mm beyond each end
- Vapour barrier
- Reveal board fixed with continuous bed of adhesive to be kept clear of any background vent openings
- 6mm polysulphide mastic seal
- Timber casement window as spec
- Thermabate insulated cavity closer tied back to inner leaf
- SS frame to be plugged and screwed to inner leaf
- SS corner head at reveal

B - CILL
Construction accords with LABC Construction Detail Reg: E4MCFF1
Ψ_{cill} = 0.016 W/m·K

- Timber casement window as spec
- 6mm polysulphide mastic seal
- 25mm window board and 30mm overhangs
- Cill to extend min 40mm beyond the face of the wall and drip to be clear of obstructions
- Vapour barrier
- Window frame to achieve min 30mm lap with cavity
- 12.5mm BG Wallboard 10 on plaster dabs. Continuous plaster ribbon around board edges and at reveals.
- 100mm medium density blockwork with a min density of 1050 kg/m³
- Cavity filled with Dritherm 32 Ultimate mineral wool cavity bats

C - JAMB
- Reveal board fixed with continuous bed of adhesive
- Vapour barrier
- 25mm window board and 30mm overhangs
- SS frame may be fixed to inner leaf
- 6mm polysulphide mastic seal
- Window frame to achieve min 30mm lap with cavity
- Thermabate insulated cavity closer tied back to inner leaf
- Timber casement window as spec
- 100mm medium density blockwork with a min density of 1050 kg/m³
- 12.5mm BG Wallboard 10 on plaster dabs. Continuous plaster ribbon around board edges and at reveals.
- Cavity filled with Dritherm 32 Ultimate mineral wool cavity bats

Windows
New windows provided as part of the works shall be BFRC Certified and shall achieve the u value stated in the specification.

Door and window frames shall be positioned in the wall construction so as to overlap the wall insulation by at least 30mm. The window design shall contain adequate measures to prevent unwanted air leakage around the opening elements (e.g. draught stripping) and shall be installed in accordance to specifications correctly to the manufacturers specification. The junction between frames and external walls shall be effectively sealed using suitable proprietary filler (see Air Tightness).

All glazing to doors and windows within 300mm of doors shall be toughened glass to BS6206, to a height of 1.5m above the finished floor level. Other windows having a sill height of less than 800mm above finished floor level shall contain toughened glass to that level.

Windows denoted as fire escape windows to be provided as secondary escape windows, having a clear opening when open of 0.33m2 with a minimum dimension of 450mm. (i.e. min 750mm x 450mm) The lower level of the window opening shall be located between 800mm and 1100mm above the finished floor level and so as to be not more than 1700mm from the eaves when measured along the plane of the roof surface.

Ground floor, door and other easily accessible windows including easily accessible rooflights shall be secure windows. These windows shall be manufactured to a design that has been shown by test to meet the security requirements of PAS 24:2016. Frames shall be mechanically fixed to the building structure in accordance with the door manufacturers instructions.

An easily accessible window is one of which any part is within 2m vertically of an accessible level surface such as the ground or basement level or access balcony and in addition, any window that is within 2m vertically of a flat roof or sloping roof less than 30° pitch, which is within 3.5m of ground level.

Walls
For cavities up to 100mm wide, 225mm wide stainless steel double triangle or vertical twist ties to BS EN 845-1:2003 are to be provided between leaves at max 750mm horizontal centres and max 450mm vertical centres, staggered. At reveals, wall ties are to be provided at 225mm vertical centres. Cavites of 150mm wide, shall be provided with 275mm wide suitable ties such as Anchors ST1 or Teplo 2 low thermal conductivity ties at the above vertical and horizontal centres, unless otherwise specified by the Structural Engineer. Where low thermal conductivity ties are specified they should not be substituted without reference to BRD Tech Ltd, as this may adversely affect the U value of the wall construction.

Close cavities at reveals using Thermabate or similar insulated cavity closers fitted in accordance with the manufacturer's instructions.

Lintels, generally to be from the Catnic range and to be of the thermally broken type, depending on cavity type. A cavity tray DPC with stop ends is to be provided over lintels, with associated weep vents to the outer leaf at 450mm c/cs. Lintels are to be provided with minimum 150mm bearing unless otherwise stated.

To avoid cold bridging no brickwork is to be built into the inner leaf. Where coursing is necessary, coursing blocks are to be used.

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE OTHER BUILDING REGULATIONS DRAWINGS

DETAIL 05 — MASONRY CAVITY WALL / INTERMEDIATE FLOOR JUNCTION - FACE BRICKWORK - METAL WEBB JOISTS

MC - INTFLR & WALL #1

Ψ_{floor} = 0.000 W/m·K
Nominal Wall U value in the range = 0.19-0.28 W/m²K

Photographic evidence will be required for this construction

JOISTS PERPENDICULAR TO WALL
- 12.5mm BG Wallboard 10 on plaster dabs. Continuous plaster ribbon around board edges and at reveals.
- Primed MDF skirting adhesive fixed to plaster board
- 6mm polysulphide mastic seal
- 50x50 sw noggin to support board edge
- 22mm t&g chipboard decking with glued and screwed joints
- 35x5x1m galvanised mild steel restraint strap at 1200mm c/cs. Seal penetration through inner leaf
- Galvanised steel, masonry joist hanger to suit joist span
- Posi joist size and centres as specified
- Strongback bracing to specialist design
- Strongback post
- 100mm acoustic insulation quilt
- 12.5mm BG Wallboard 10 ceiling, butted against blockwork
- 50x50 sw support board edge
- 6mm polysulphide mastic seal
- 100mm medium density blockwork with a min density of 1050 kg/m³
- Cavity filled with Dritherm 32 Ultimate mineral wool cavity bats
- 100mm medium density blockwork with a min density of 1050 kg/m³

JOISTS PARALLEL TO WALL
- Use coursing blocks to the same density as the leaf, as required to accommodate restraint straps
- 35x5x1m steel restraint strap at 1200mm c/cs. Seal penetration through inner leaf
- Pack quilt insulation between perimeter joist and inner leaf
- 102mm Facing brickwork approved by the planning authority as required
- Strongbacks supporting restraint straps
- 15mm BG Wallboard on plaster dabs. Continuous plaster ribbon around board edges and at reveals.
- Primed MDF skirting adhesive fixed to plaster board
- 6mm polysulphide mastic seal
- 22mm t&g chipboard decking with glued and screwed joints
- Posi joist size and centres as specified
- 100mm acoustic insulation quilt
- 15mm BG Wallboard ceiling, butted against blockwork
- 6mm polysulphide mastic seal

First Floor (Metal Web Engineered Joists - 30 mins FR)
Install open web joists spaced and braced as shown specialist suppliers details. Joists to be supported from hangers on external walls and party walls and built into internal walls as required unless otherwise noted on the plans.

Floors decking to be 22mm tongue and groove P5 grade chipboard. Ceilings finished with 15mm British Gypsum Wallboard and skim. Lay 100mm mineral wool quilt (10kg/m³) in floor compartments to the underside of external walls by 30x5 galvanised metal straps at max 1.8m c/c.The joists should not be cut or notched in any way unless specifically engineered by the manufacturer.

Drawings and specifications provided by the specialist designer relating to sizing, spacing, trimming, bracing and general structural arrangement shall take precedence over these details.

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE OTHER BUILDING REGULATIONS DRAWINGS

DETAIL 06 — MASONRY CAVITY WALL / ROOF JUNCTION - EAVES FACE BRICKWORK - SLOPING CEILING CUT ROOF - PLAIN TILES

MC - P ROOF - EAVES #6

Nominal Roof U value = 0.12 W/m²K
Ψ_{eaves} = 0.007 W/m·K
Construction accords with LABC Construction Detail Reg: E11MCFF1
Nominal Wall U value in the range = 0.17-0.28 W/m²K

Photographic evidence will be required for this construction

- 175mm Kingspan TP10 tightly fitted between the rafters with a min 25mm void below the roofing membrane
- Plain tiles in accordance with the Planning aproval. Handmade clay tiles should be laid at min 40° pitch
- Dupont Tyvek Supro vapour permeable roof membrane with lapped and taped joints
- Treated 50x25 sw battens at centres to suit required headlap
- Timber rafters in accordance with the structural engineers details details
- Maintain min 25mm ventilation void
- Rafters secured to wall plate using galvanised truss clips
- Mineral wool insulation dressed over plate to link with cavity insulation - ensure there are no gaps
- Redland Eaves Vent system - over fascia vent
- UV resistant eaves sheet lapped under Tyvek and dressed into gutter
- Gutter as specification - minimum 100mmØ half round
- Dupont Airguard-A2-FR AVCL with lapped and taped joints
- 37.5mm Kingspan M118 insulated plaster board
- 6mm polysulphide mastic seal
- 100x50 sw wall plate
- 35x5x1000 long galvanised ms strap at 600mm c/cs
- 12.5mm BG Wallboard 10 on plaster dabs. Continuous plaster ribbon around board edges and at reveals.
- 9mm painted ply soffit notched into 25mm painted ply fascia supported on 38x38 sw framing.
- 102mm Facing brickwork approved by the planning authority as required
- Cavity filled with Dritherm 32 Ultimate mineral wool cavity bats
- 100mm medium density blockwork with a min density of 1050 kg/m³

Pitched Roof - RP-BU-5a
The pitched roof is to consist of tiles to suit pitch and in accordance with the Planning Permission, on tanalised 50 x 25 s.w. battens at the appropriate centres, on Tyvek Supro vapour permeable membrane, laps sealed with Tyvek Acrylic tape, on min 150x50 C16 rafters at 400mm c/cs (in accordance with the structural engineers details). Rafters to be fixed to 100 x 50 tanalised wall plate using galvanised mild steel truss clips.

Where sloping ceilings occur, insulate between the rafters using 175mm Kingspan TP10 (λ=0.022w/mK), maintaining a min 25mm void below the breather membrane. Fix Dupont Airguard A2 FR airvapour control layer (AVCL) to the underside of rafters forming sloping ceilings and clad with 37.5mm Kingspan K118 insulated plasterboard with taped and filled joints and plaster skim. Ensure continuity of roof insulation with the wall insulation by dressing mineral wool over the wall plate, but maintaining the minimum ventilation void.

Use a Tyvek Eaves Carrier. Stop the membrane short of the fascia and lap it onto the Eaves Carrier.

N.B. This is a vapour permeable roof construction, but cross ventilation of the roof void is provided to allow for adverse winter climate conditions. Soffit ventilation rated at 25000mm²/m and ridge at high level level ventilation at 5000mm²/m should be provided as shown.

It is important that all potential air paths through the ceiling are effectively sealed to prevent warm moist air entering the roof space. Particular attention should be given to penetrations by services and light fittings.

Tyvek-Supro roof membrane
Kingspan TP10 PIR insulation board
Dupont Airguard A2 FR AVCL
LABC Construction detail E11MCFF1 wall/eaves junction

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE OTHER BUILDING REGULATIONS DRAWINGS

DETAIL 07 — PITCHED ROOF CONSTRUCTION - ATTIC TRUSS - VENTILATED RIDGE PLAIN TILES

RP - RIDGE #21

Nominal Roof U value = 0.1 W/m²K - flat ceilings
= 0.1 W/m²K - sloping ceilings

- Redland Dryvent ridge ventilation system
- S/S clamping plate
- S/S clamping plate
- S/S drive screw with neoprene washed and foam grommet
- Half round ridge tile to match tiles
- SS ridge batten fixing strap nailed to each rafter with SS ring shank nails
- 38mm treated sw ridge batten
- uPVC profiled filler unit
- Polypropylene ridge to ridge seal
- Attic truss rafter
- Eaves/top tile
- Plain tiles in accordance wit the Planning approval. Handmade clay tiles should be laid at min 40° pitch
- 50x25 sw tiling batten
- Tile - must be twice nailed
- Dupont Tyvek Supro vapour permeable roof membrane with lapped and taped joints
- Underlay finished 30mm from apex
- Treated 50x25 sw battens at centres to suit required headlap
- 175mm Kingspan TP10 insulation between rafters with min 25mm void below
- Dupont Airguard-A2-FR AVCL with lapped and taped joints
- 2No layers of 200mm thick mineral wool quilt installed between and over the ceiling joists
- 37.5mm Kingspan K118 insulated plasterboard fixed to underside of rafters
- 12.5mm BG Wallboard

Pitched Roof
Roof to be constructed strictly in accordance with Accredited Details:- E11MCFF2 and E11MCFF2.

The pitched roof is to consist of tiles to suit pitch and in accordance with the Planning Permission, on tanalised 50 x 25 s.w. battens at the appropriate centres, on Tyvek Supro vapour permeable membrane, on prefabricated trussed rafters manufactured and braced to BS 5268-3: 1998. Suitable wind bracing shall be provided in accordance with the truss manufacturer instructions. Trusses to be fixed to 100 x 50 tanalised wall plate using galvanised mild steel truss clips. The wall plate shall be strapped to the inner leaf at 1.2m c/cs using 1200x100x35 galvanised ms straps.

Where sloping ceilings occur, insulate between the rafters using 175mm Kingspan TP10, PIR insulation board (λ=0.022 w/mk), maintaining a min 25mm void below the breather membrane. Fix Dupont Airguard-A2-FR airvapour control layer (AVCL) to the underside of rafters forming sloping ceilings and clad with 37.5mm Kingspan K118 insulated plasterboard with taped and filled joints and plaster skim.

Clad the ashlar or perimeter walls with 12.5mm plaster board, on Dupont Airguard-A2-FR airvapour control layer (AVCL). Insulate between the studs with 100mm Kingspan TP10.

To the upper and lower flat ceilings, fix Dupont Airguard-A2-FR airvapour control layer (AVCL) to the underside of joists and clad with 15mm BG Wallboard with taped and filled joints and plaster skim. Ensure adequate linkage between the vapour control layers in the flat and sloping ceilings and ashlar walls. Insulate above air barrier using 400mm Rockwool quilt in two layers, between the ceiling joists and laid transversely over. Ensure continuity of insulation with the wall insulation.

Restraint Strapping
Restraint strapping as detailed by Engineer and/or specialist, with Catnic ties and gable rafters to be strapped to walls with Expamet M305 150x1350mm galvanised steel lateral restraint straps at 1200mm c/cs. Attach to minimum three ceiling joists/rafters and provide noggins between. Wall plates to be strapped to walls with Expamet M305 1.50 x 1050mm galvanised steel lateral restraint straps at 1200mm c/cs. Straps to be plugged and screwed to minimum 4no. blocks with minimum 6 no. screws.

Where recessed lighting or other services are to penetrate the ceiling, care must be taken to seal the AVCL around penetrations. Recessed light fittings shall be enclosed within a specialist airtight fire resisting hood/cover.

Use a UV resistant Tyvek Eaves Carrier. Stop the membrane short of the fascia and lap it onto the Eaves Carrier.

N.B. This is a vapour permeable roof construction, but cross ventilation of the roof void is provided to allow for adverse winter climate conditions. Soffit ventilation rated at 25000mm²/m and ridge level ventilation at 5000mm²/m should be provided as shown.

It is important that all potential air paths through the ceiling are effectively sealed to prevent warm moist air entering the roof space. Particular attention should be given to penetrations by services and light fittings. Loft hatches should be insulated and fitted with compressible draught strips. The installation generally must be in accordance with the manufacturers details.

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE OTHER BUILDING REGULATIONS DRAWINGS