



OPTION 1 - DETAIL 4

GROUND BEARING SLAB WITH SCREED FINISH

THE CAST IN SITU GROUND-BEARING SLAB TO HAVE A 50 MM FLOATING SCREED USING A PROPRIETARY READY-MIXED CEMFLOOR OR SIMILAR PRODUCT, SUITABLE FOR UNDERFLOOR HEATING, ON A 500G POLYTHENE SEPARATING LAYER (VCL). UNDERNEATH, A 150 MM LAYER OF CELOTEX GA4000 OR SIMILAR FLOORING-GRADE PIR INSULATION ARE INSTALLED ON A 500G POLYTHENE SEPARATION MEMBRANE.

A 150 MM THICK REINFORCED CONCRETE SLAB, USING CONCRETE GRADE C25/30 FROM AN ACCREDITED READY-MIXED SUPPLIER, TO BE CAST IN SITU. IT IS REINFORCED WITH A252 MESH AT MID-SECTION. THE SLAB WILL REST ON A 1200G CONTINUOUS POLYTHENE DPM, LAPPED AND SEALED AT JOINTS WITH A MINIMUM LAPPING WIDTH OF 300 MM, TURNED UP TO THE WALL AND LAPPED WITH DPC

THIS SETUP TO BE SUPPORTED BY AT LEAST 150 MM OF COMPACTED HARDCORE, BLINDED WITH SAND. A NON-WOVEN GEOTEXTILE MEMBRANE, FILTER LAYER, IS USED TO SEPARATE THE EXISTING SOIL FROM THE CRUSHED HARDCORE.

U-VALUE 0.15 W/M²K



OPTION 2 - DETAIL 4

BEAM AND BLOCK GROUND FLOOR WITH SCREED FINISH

FINISHES TO BE 50MM SAND/CEMENT SCREED (MIX BETWEEN 1:3 - 1:4) TO BS 8204-1:2003+A1:2009 ON 500G POLYTHENE SEPARATING LAYER (VCL). INSTALL 100 MM CELOTEX GA4000 OR SIMILAR FLOORING GRADE PIR INSULATION ON 1200G CONTINUOUS POLYTHENE DAMP PROOF MEMBRANE (DPM) TO BE LAID OVER BEAM AND BLOCK FLOOR, LAPPED AND SEALED AT ALL JOINTS AND LINKED TO DPC'S IN WALLS. PCC BEAM AND BLOCK SUPPORTED ON INTERNAL LEAF OF CAVITY WALL, SUPPLIED AND INSTALLED TO BS EN 1997-1:2004 + A1:2013 AND BS EN 1992-1-1:2004. BLOCKS USED IN SUSPENDED FLOORS TO BE MEDIUM DENSITY CONCRETE BLOCKS WITHIN A MINIMUM COMPRESSIVE STRENGTH OF 7.3N/MM² AND A MINIMUM DENSITY OF 1450KG/M3. PCC BEAMS TO HAVE 100MM MINIMUM BEARING ONTO DPC COURSE AND LOAD BEARING WALLS. BELOW NON-LOAD BEARING PARALLEL PARTITIONS PROVIDE DOUBLE BEAMS. GROUT ALL JOINTS WITH 1:4 CEMENT/ SAND MIX. ALL SLEEPER WALLS TO HAVE HONEY COMBED CONSTRUCTION AND MIN. 7 N/MM2 DENSE CONCRETE FOR USE BELOW DPM/DPC LEVEL.

PROPRIETARY PLASTIC AIR BRICKS AT MAX 1.8M CENTRES AND 450MM FROM WALL CORNERS TO PROVIDE CROSS VENTILATION OF VOIDS BELOW SUSPENDED FLOOR. 150MM VENTILATED VOID BELOW SLAB. WEED KILLER TREAT REDUCED LEVEL.

U-VALUE 0.15 W/M²K

PATIO FINISHES AND GARDEN RETAINING WALL - DETAIL 5

EXCAVATE THE AREA TO A DEPTH OF APPROXIMATELY 200 MM PLUS THE THICKNESS OF THE PAVERS. DEEPER EXCAVATION TO 350MM REQUIRED AROUND THE EDGE TO CAST THE FOOTING OF THE BLOCKWORK RETAINING WALL, MADE OF 140MM THK BLOCKWORK IN ACCORDANCE WITH DIAGRAM 11 OF AD-A1 (FOR A MAX RETAINED HEIGHT OF 4X140=560MM). LAY OF NON-WOVEN GEOTEXTILE MEMBRANE OVER THE ENTIRE EXCAVATED AREA, OVERLAPPED AT JOINTS BY AT LEAST 300MM. SPREAD THE HARDCORE EVENLY OVER THE MEMBRANE TO A DEPTH OF APPROX.150 MM.

USE A PLATE COMPACTOR TO COMPACT THE HARDCORE LAYER UNTIL IT IS FIRM AND LEVEL. INSTALL THE ACO DRAIN ALONG THE EDGE NEXT TO THE EXTERNAL WALL OF THE HOUSE. ENSURE IT IS LEVEL AND AT THE CORRECT HEIGHT TO COLLECT WATER FROM THE PATIO SURFACE. CONNECT THE ACO DRAIN TO A SUITABLE DRAINAGE OUTLET OR SOAKAWAY TO CHANNEL WATER AWAY FROM THE HOUSE FOUNDATION.

SAND BLINDING THE HARDCORE SPREADING 50 MM LAYER OF SHARP SAND OVER THE COMPACTED HARDCORE. USE A SCREED BOARD TO LEVEL THE SAND. LAY CONCRETE PAVERS FROM ONE CORNER, MAINTAINING A CONSISTENT GAP OF 5 MM BETWEEN PAVERS FOR PERMEABILITY. FILL JOINTS BY BRUSHING FINE SAND INTO THE JOINTS BETWEEN PAVERS TO LOCK THEM IN PLACE. LIGHTLY COMPACT THE PAVERS WITH A PLATE COMPACTOR FITTED WITH A RUBBER MAT TO AVOID DAMAGE.

