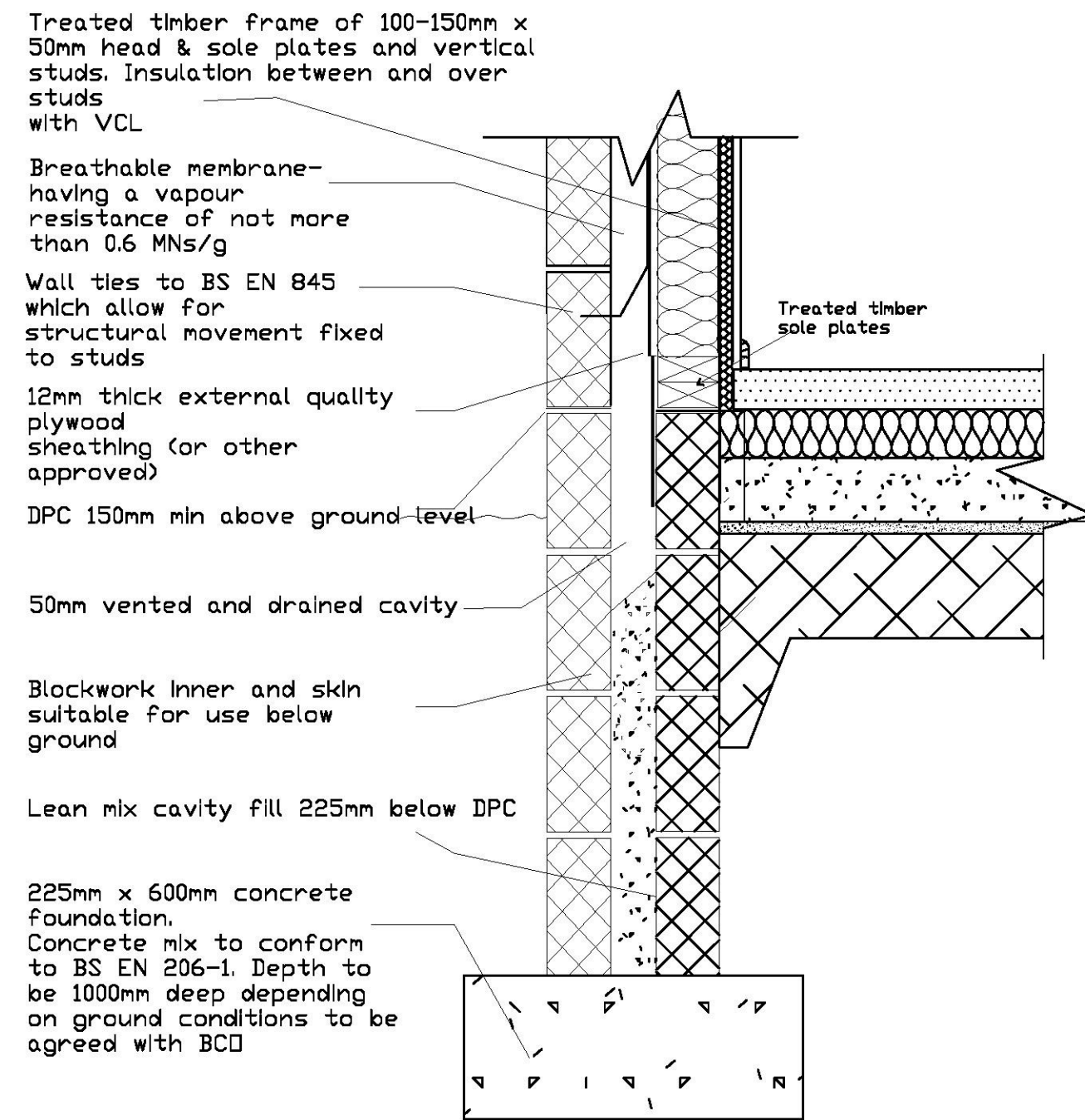
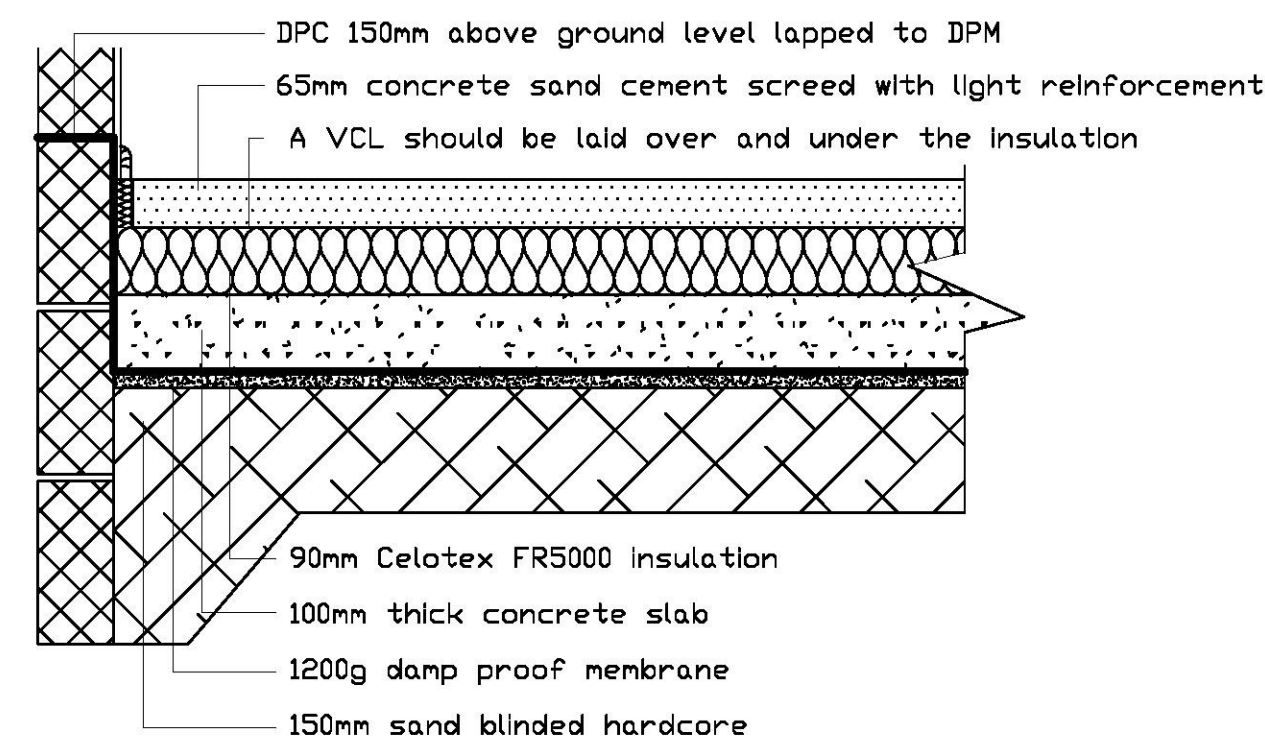


TIMBER FRAMED WALL / SOLID
FLOOR / STRIP FOUNDATION



SOLID GROUND FLOOR



SOLID FLOOR INSULATION OVER SLAB

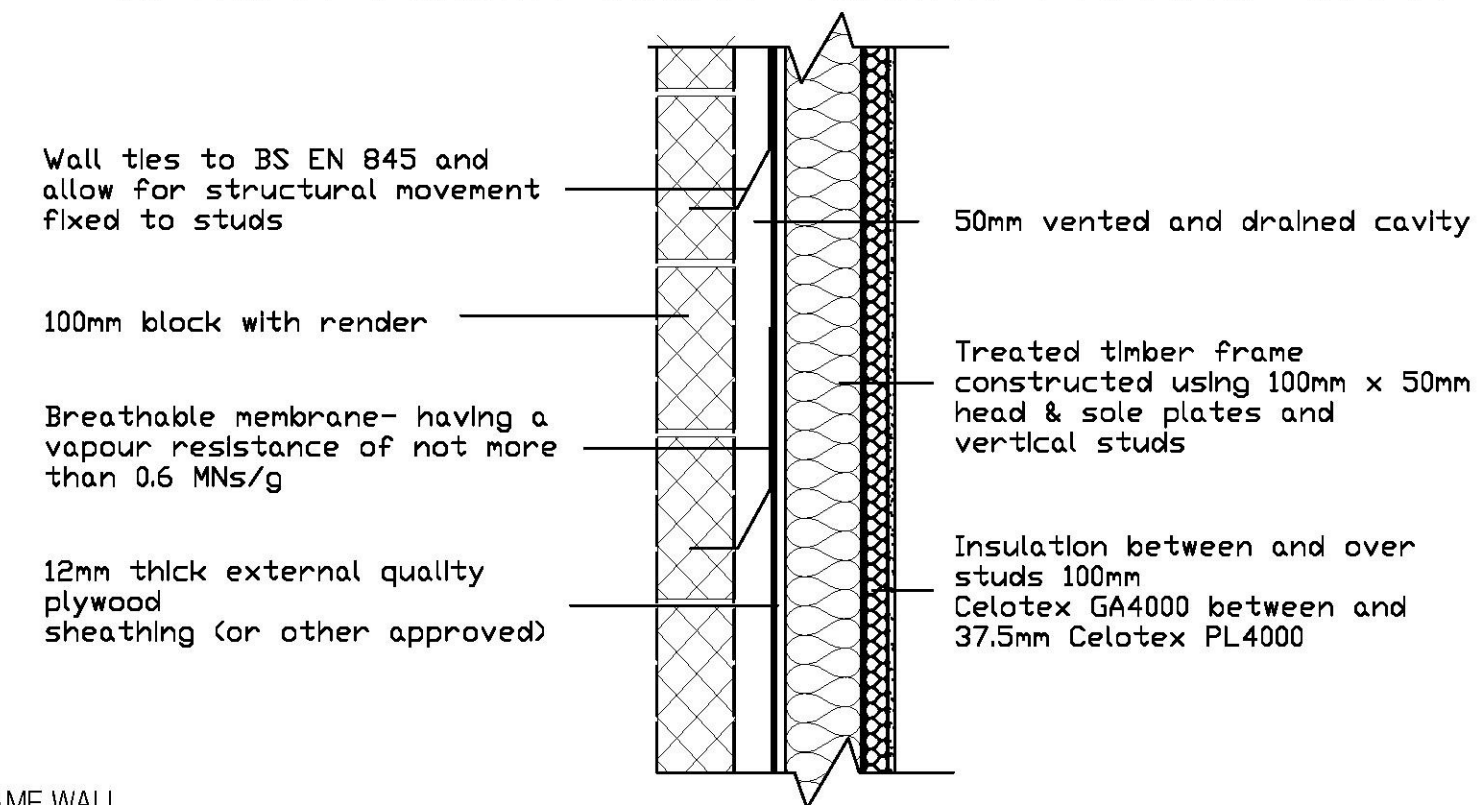
To meet min U value required of 0.18 W/m²K

Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 200mm sand bedding. Provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over a 1200 gauge polythene DPM. DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 90mm thick Celotex FR5000. 25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement.

Where drain runs pass under new floor, provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain.

Where existing suspended timber floor air bricks are covered by new extension, ensure cross-ventilation is maintained by connecting to 100mm dia UPVC pipes with 100mm concrete cover laid under the extension. Pipes to terminate at new 65mm x 215mm air bricks with cavity tray over.

RENDER FINISH 100mm TIMBER FRAMED WALL



TIMBER FRAME WALL

To achieve minimum U Value of $0.28 \text{ W/m}^2\text{K}$

100mm rendered board with 50mm wired and drained cavity tied to breathable membrane (having a vapour resistance of not more than 0.6 MVs/g) and 12mm thick WBP external quality plywood sheathing (or other approved). Ply fixed to treated timber frame studs constructed using 100mm x 50mm treated timbers with head & sole plates and nogginns at 400mm ctrs or to s/engineer's details & calculations. Insulation to be 100mm Celotex GA4000 between studs and 37.5mm Celotex PL4000 insulated plaster board with VCL over studs. Finish with 3mm skim coat of finishing plaster. All junctions to have water tight construction, seal all perimeter joints with tape internally and with silicon sealant externally.

DPC

Provide horizontal strip polymer (hyload) damp proof course to both internal and external skins minimum 150mm above external ground level. New DPC to be made continuous with existing DPC's and with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed.

WALL TIES

All walls constructed using stainless steel vertical twist type retaining wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm ctrs at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS 5628-6.1: 1996 and BS EN 845-1: 2003

CAVITIES

Provide cavity trays over openings. All cavities to be closed at eaves and around openings using Thermabate or similar non combustible insulated cavity closers. Provide vertical DPCs around openings and abutments. All cavity trays must have 150mm upstands and suitable cavity weep holes (min 2) at max 900mm centres.

EXISTING TO NEW WALL

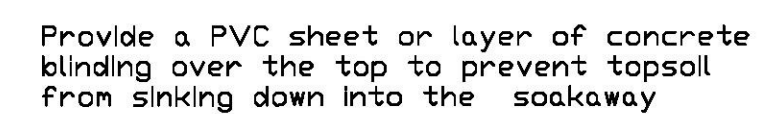
Cavities in new wall to be made continuous with existing where possible to ensure continuous weather break. If a continuous cavity cannot be achieved, where new walls abut the existing walls provide a movement joint with vertical DPC. All tied into existing construction with suitable proprietary stainless steel profiles.

CAVITY BARRIERS

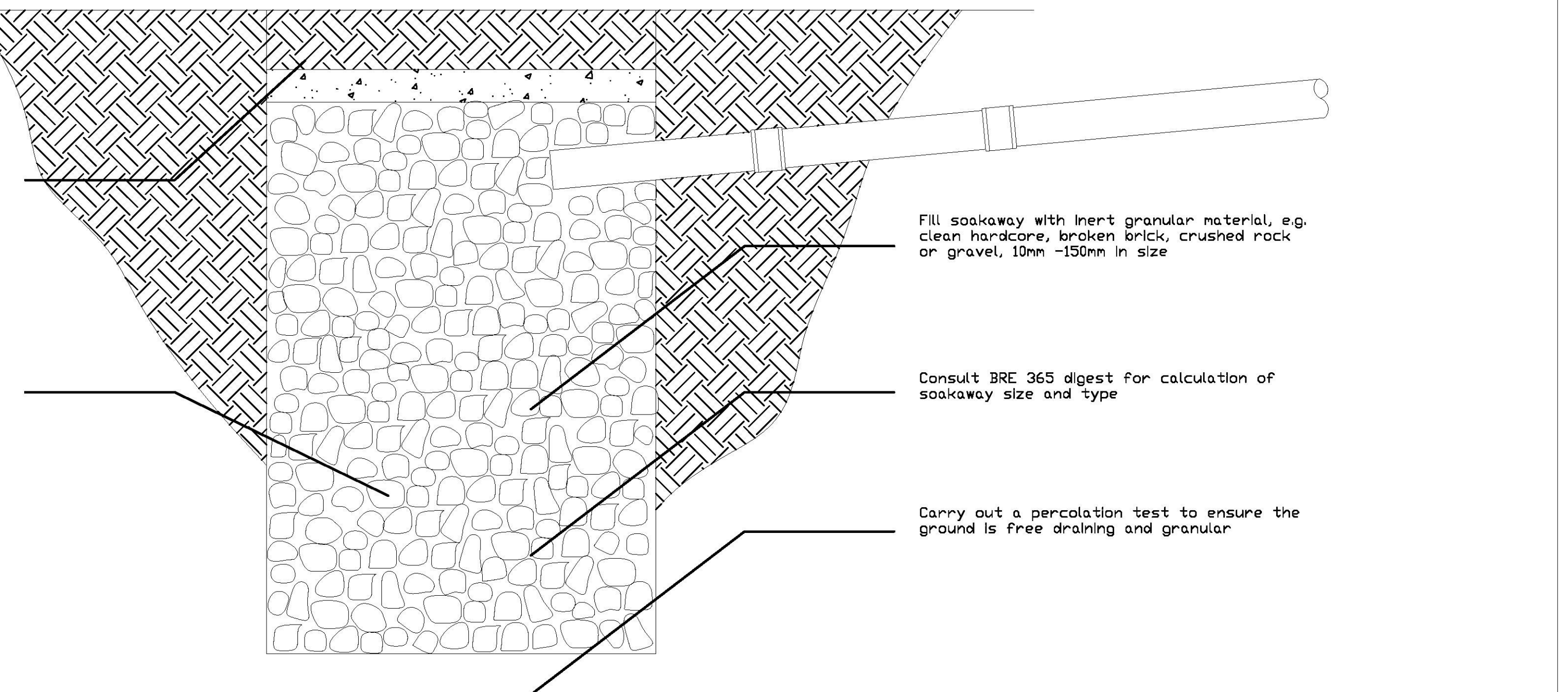
30 minute fire resistant cavity barriers to be provided at at tops of walls, gable end walls and vertically at junctions with separating walls & horizontally at separating walls with cavity tray over installed according to manufacturers details.

SOAKAWAY

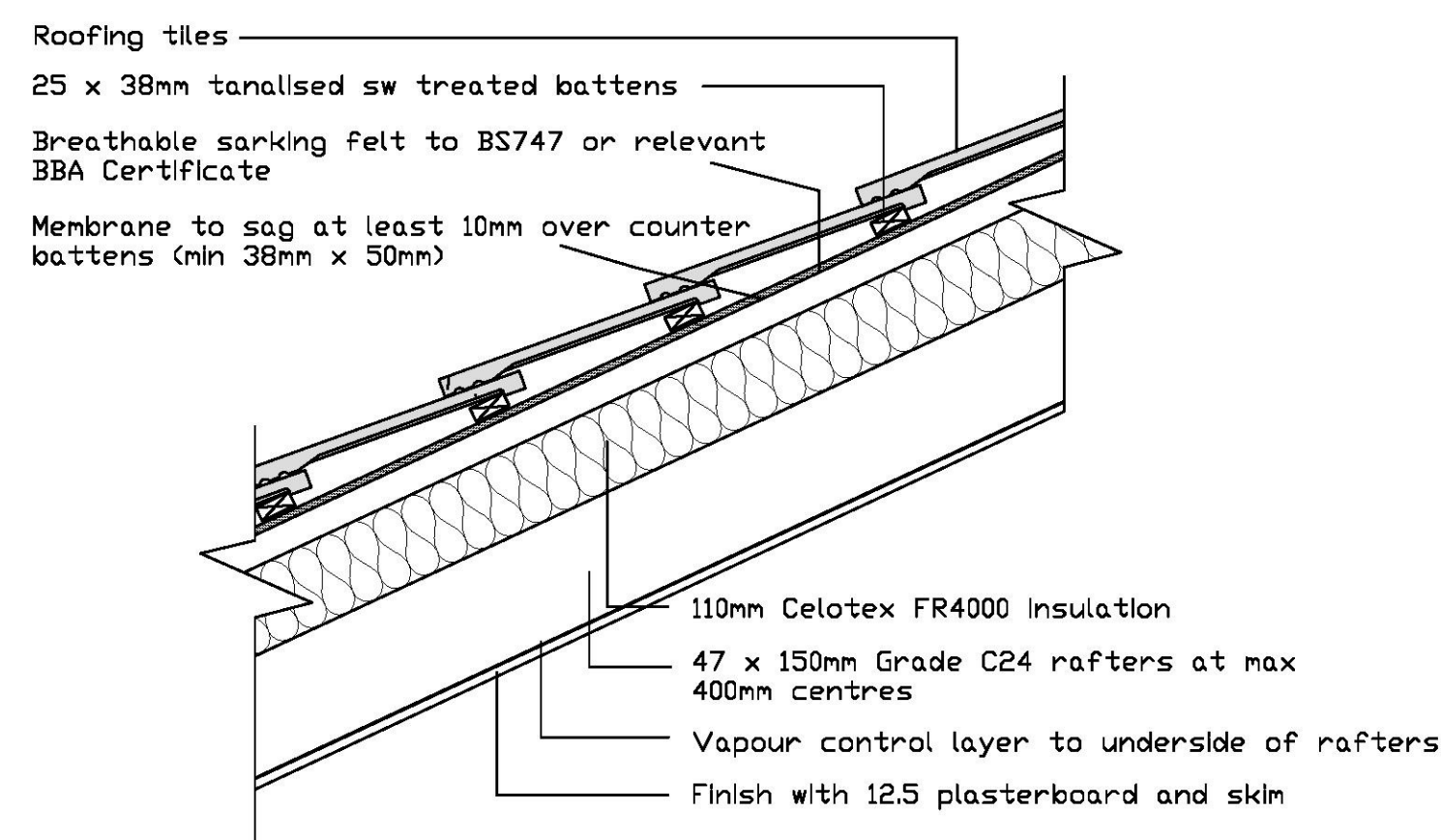
Soakaway size and type dependent on
space requirements, site layout,
topography, water table, subsoil type, etc.
Designed to BS EN 752



Build soakaways on land lower than, or sloping away from buildings, at a minimum of 5m away from the foundations of a building (BS 8301)



WARM PITCHED DORMER ROOF



WARM PITCHED DORMER ROOF

To achieve min U-value required of $0.18 \text{ W/m}^2\text{K}$

Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1. Roofing tiles to match existing fixed to tile battens secured over breathable sarking felt to relevant BBA Certificate allowing the breather felt to sag at least 10mm over preservative-treated counter battens (min 38mm x 50mm). Provide 110mm Celotex FR400 insulation boards installed under the counter battens and over 47 x 150mm timber rafters strength class C24 at 400 c/c. A vapour control layer should be provided to the underside of the rafters. Finish with 12.5 plasterboard and skim.

Restraint strapping - Ceiling joists tied to rafters (if raised collar roof consult structural engineer), 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 100 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres.