

FOUNDATION AND WALL DETAILS

SITE PREPARATION

Ground to be prepared for new works by removing all unsuitable material, vegetable matter and tree or shrub roots to a suitable depth to prevent future growth. Seal up, cap off, disconnect and remove existing redundant services as necessary. Reasonable precautions must also be taken to avoid danger to health and safety caused by contaminants and ground gases, e.g. landfill gases, radon, vapours etc. on or in the ground covered, or to be covered by the building.

WALLS BELOW GROUND

All new walls below ground to be constructed using blockwork compliant with BS EN 771 and suitable for below ground level or semi engineering brickwork. Walls to be built using 1:4 masonry mortar mix or equal approved specification to BS EN 1996-1-1. Cavities below ground level to be filled with lean mix concrete min 225mm below damp proof course. Or provide lean mix backfill at base of cavity wall (150mm below damp course) laid to fall to weepholes.

PIPES PASSING THROUGH WALLS

Walls above pipes passing through substructure walls to be supported on suitable lintel on semi-engineering bricks. Pipe to be provided with a 50mm clearance all round, opening to be masked with granular backfill (pea shingle) around pipe. DPC to be provided as required by BCO.

Alternatively
Where new pipework passes through external walls the pipe work is to be provided with rocker pipes at a distance of 150mm either side of the wall face. The rocker pipes must have flexible joints and be a maximum length of 600mm.

STRIP FOUNDATION

Provide 225mm x 600mm concrete foundation, concrete mix to conform to BS EN 206:2013 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2010 Building Regulations A1/2 and BS 8004:2015 Code of Practice for Foundations. Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting internal walls to be min 600mm below ground level. Sulphate resistant cement to be used if required. Please note that should any adverse soil conditions be found or any major tree roots in excavations, the Building Control Officer is to be contacted and the advice of a Structural Engineer should be sought.

SOLID FLOOR INSULATION UNDER SLAB

To meet min U value required of 0.18 W/m²K
P/A ratio 0.5
Solid ground floor to consist of 150mm consolidated well-rammed hardcore, blinded with 50mm sand blinding. Provide a 1200 gauge polythene DPM, DPM to be lapped in with DPC in walls. Floor to be insulated over DPM with 90mm thick Celotex GA4000 insulation.
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 by 150mm and sealed, provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over VCL. Finish with 65mm sand/cement finishing screed with light mesh reinforcement.
Where drain runs pass under new floor, provide A142 mesh 1.0m wide within bottom of slab min 50mm concrete cover over length of drain.

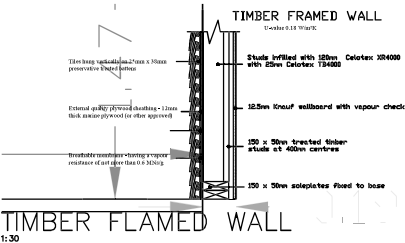
Where existing suspended timber floor air bricks are covered by new extension, ensure cross-ventilation is maintained by connecting to 100mm dia UPVC pipes to terminate at new 65mm x 215mm air bricks built into new cavity wall with 100mm concrete cover laid under the extension. Ducts to be sleeved through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

EXISTING STRUCTURE

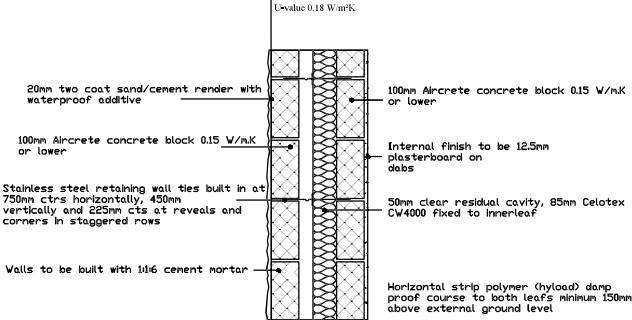
Existing structure including foundations, beams, walls and lintels carrying new and altered loads are to be exposed and checked for adequacy prior to commencement of work and as required by the Building Control Officer.

PARTIAL FILL CAVITY WALL

To achieve minimum U Value of 0.18 W/m²K
20mm two coat sand/cement render to comply to BS EN 13914-1 with waterproof additive on 100mm lightweight block, 0.15 W/m²K, e.g. Celcon Solar, Thermalite Turbo. Ensure a 50mm clear residual cavity and provide 85mm Celotex CW4000 fixed to inner leaf constructed using 100mm block, 0.15 W/m²K, e.g. Celcon Solar, Thermalite Turbo. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1.6 cement mortar.

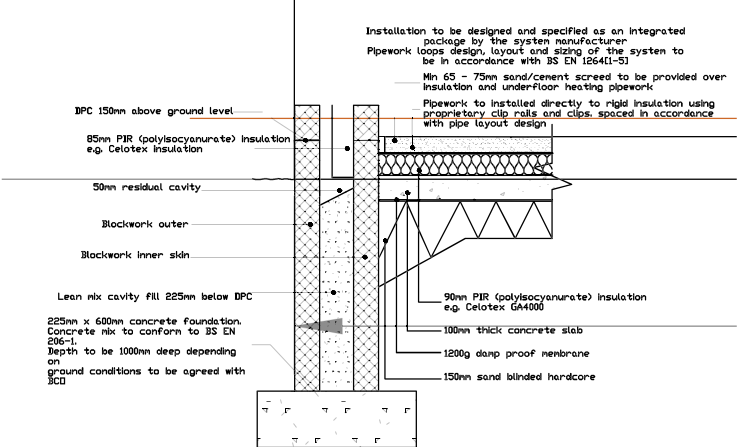


RENDERED PARTIAL FILL CAVITY WALL



RENDERED PARTIAL FILL CAVITY WALL

STRIP FOUNDATION



FOUNDATION AND FLOOR DETAIL

1:20

DPC

Provide horizontal strip polymer (hyload) damp proof course to both internal and external skins. DPC to be placed a 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 EN 84. Wall ties for cavities over 150mm to be suitable for cavity width, and installed as manufacturer's details.

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

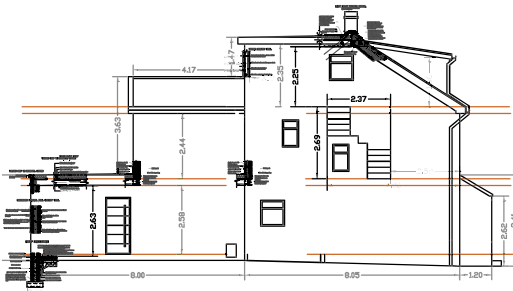
Cavities in new wall to be made continuous with existing, where possible, to ensure continuous weather break. If a continuous cavity cannot be achieved, where new walls abuts the existing walls provide a movement joint with vertical DPC. All tied into existing construction with suitable proprietary stainless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

CAVITY BARRIERS

30 minute fire resistant cavity barriers to be provided around openings, at tops of walls, gable end walls, vertically at junctions with separating walls and horizontally at separating floors. Cavity trays to be provided over barrier where required. Trays and cavity barriers to be installed according to manufacturer's details.

MOVEMENT JOINTS

Movement joints to be provided at the following maximum spacing:
Clay brickwork – 12m.
Calcium silicate brick – 7.5-9m.
Lightweight concrete block – density not exceeding 1,500kg/m³ – 6m.
Dense concrete block – density exceeding 1,500kg/m³ – 7.5-9m.
Any masonry in a parapet wall (length to height ratio greater than 3:1) – half the above spacings and 1.5m from corners.
Movement joint widths for clay bricks to be not less than 1.3mm/m i.e. 12m – 16mm and for other masonry not less than 10mm.
Additional movement joints may be required where the aspect ratio of the wall (length : height) is more than 3:1.
Considerations to be given to BS EN 1996-1-2:2005 Eurocode 6. Design of masonry structure.



GABLE ELEVATION

1:200

Revision notes:

Rev.	Date:	Notes:
A	30/08/2023	PLANNING ISSUE - FOUNDATION AND WALL DETAIL

Drawn by:

AB

Client:

AB

Project:

302 PLECKGATE ROAD, RAMSGREAVE
BB1 8QU

Drawing Title:

FOUNDATION AND WALL DETAIL
PLANNING ISSUE

Date:

30/08/2023

Scale @ A3:

1:200, 1:30 & 1:20

Revision:

A

DRAWING NUMBER: A006