

EXTENSION BUILDING REGULATIONS NOTES

PLANNING NOTE

Under new regulations that came into force on 1 October 2008 an extension or addition to a house is considered to be permitted development if it requires an application for planning permission, subject to the following limits and conditions:

- No more than half the area of land around the 'original house' would be covered by additions to buildings.
- No extension forward of the principal elevation or side elevation fronting a highway.
- No extension higher than the highest part of the roof.
- Maximum depth of a single storey rear extension to be three metres for an attached house and four metres for a detached house.
- Maximum height of a single storey rear extension to be four metres.
- Maximum ridge and eaves height to be higher than existing house.
- Roof pitch of extensions higher than one storey to match existing house.
- Materials to be similar in appearance to the existing house.
- Upper-floor, side-facing windows to be obscure glazed, any opening to be 1.7m above the floor.

PARTY WALL ACT

The owner should they need to do so under the requirements of the Party Wall Act 1996, has a duty to serve a Party Structure Notice on any adjoining owner if building work on, to or near an existing Party Wall involves any of the following:

- Support of beam
- Excavation of DPC through wall
- Raising a wall or cutting off projections
- Demolition and rebuilding
- Underpinning
- Insertion of lead flashings
- Excavations within 3 metres of an existing structure where the new foundations will go deeper than existing foundations, or within 6 metres of an existing structure where the new foundations are within a 15 degree cone of the adjoining foundations.

A Party Wall Agreement is to be in place prior to start of works on site.

THERMAL BRIDGING

Care shall be taken to limit the occurrence of thermal bridging in the insulation layers caused by gaps within the thermal element, (i.e. around windows and door openings). Recessed cable provision shall also be made to ensure the extension is constructed to minimise unwanted air leakage through the new building fabric.

MATERIALS AND WORKMANSHIP

All works are to be carried out in a workmanlike manner. All materials and workmanship must comply with Regulation 7 of the Building Regulations, all relevant British Standards, European Standards, Agreement Certificates, Product Certificate of Compliance (Brite-Mark) etc. Products conforming to a European technical standard or harmonised European product should have a CE marking.

SITE PREPARATION

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

EXISTING STRUCTURE

Existing structure including foundations, beams, walls and linels 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.

LINEELS

For externally distributed loads and standard 2 storey domestic loadings only. Linels widths are to be equal to wall thickness. All linels over 750mm sized internal door openings to be 50mm deep pre-stressed concrete plain linels. 150mm deep linels are to be used for 900mm sized internal door openings. Linels to have a minimum bearing of 150mm on each end. Any existing linels carrying additional loads are to be exposed for inspection at commencement of work on site. All pre-stressed concrete linels to be designed and manufactured in accordance with BS 8110, with a concrete strength of 50 or 40 N/mm² and incorporating steel strands to BS 5886 to support loadings assessed to BS 5971 Part 1. For other structural openings provide proprietary insulated steel linels suitable for spans and loadings in compliance with Approved Document A and linels manufacturers standard loads. Stop ends, DPC trays and weep holes to be provided above all externally located linels.

STRAPPING FOR PITCHED ROOF

Cable walls should be strapped to roofs at 2m centres. All external walls running parallel to roof rafters to be restrained at roof level using 1000mm x 30mm x 5mm galvanised mild steel horizontal straps or other approved to BS EN 845-1 built into walls at max 2000mm centres and to be taken across minimum 3 rafters and screwed fixed. Provide solid noggins between rafters at strap positions. All wall plates to be 100 x 50mm fixed to inner skin of cavity wall using 30mm x 5mm x 100mm galvanised metal straps or other approved to BS EN 845-1 at maximum 2m centres.

FLAT ROOF RESTRAINT

100m x 50mm C16 grade timber wall plates to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps at maximum 2.0m centres fixed to internal wall faces.

INTERNAL STUD PARTITIONS

100mm x 50mm softwood treated timbers studs at 400mm ctrs with 50 x 100mm head and sole plates and solid intermediate horizontal noggins at 103 height or 650mm. Provide mm 10kg/m³ density acoustic soundproof quilt tightly packed (eg. 100mm Rockwool or Isovoac mineral fibre sound insulation) in a void to the full depth of the stud. Partitions built off double up joists where partitions are parallel or provide noggins where at right angles, or built off linels on finished concrete slabs or s/d ground floor. Walls faced throughout with 12.5mm plaster board with skim plaster finish. Taped and jointed complete with beads and stops.

STAIRS

Dimensions to be checked and measured on site prior to fabrication of stairs. Timber stairs to comply with BS55 and with Part K of the Building Regulations. Max riser 220mm, max going 220mm. Two rises per one going should be between 50 and 700mm. Tapered treads to have going in centre of tread at least the same as the going on the straight. Min 50mm going of tapered treads measured at narrow end. Pitch not to exceed 42 degrees. The width and length of every landing should be at least as great as the smallest width of the flight. Doors which swing across a landing at the bottom of a flight should leave a clear space of at least 400mm across the full width of the flight. Min 2mm headroom measured vertically above pitch line of stairs and landings. Handrail on staircases to be 900mm above the platform, handrail to be at least one side if stairs are less than 1m wide and on both sides if they are wider. Ensure a clear width between handrails of minimum 600mm. Balustrading designed to be unclimbable and should contain no space through which a 100mm sphere could pass. All work for stairs as designed by a Structural Engineer.

OPENINGS AND RETURNS

An opening or recess greater than 0.1m² shall be at least 550mm from the supported wall (measured internally), construction for poor less than 550mm to be specifically engineered.

ELECTRICAL

All electrical work required to meet the requirements of Part P (electrical safety) must be designed, installed, inspected and tested by a competent person registered under a competent person self certification scheme such as ERE certification Ltd, BS, NICEIC Certification Service or Zurich Ltd. An appropriate BS1701 Electrical Installation Certificate is to be issued for the work by a person competent to do so. A copy of a certificate will be given to Building Control on completion.

INTERNAL LIGHTING

Install low energy/light fittings that only have lamps having a luminous efficiency greater than 45 lumens per circuit watt and a total output greater than 400 lumens. Not less than three energy efficient light fittings per four of the light fittings in the main dwelling spaces to comply with Part L of the current Building Regulations and the Domestic Building Services Compliance Guide.

HEATING

Extend all heating and hot water services from existing and provide new TRVs to radiators. Heating system to be designed, installed, tested and fully certified by a GAS SAFE registered specialist. All work to be in accordance with the Local Water Authorities bye laws, the Gas Safety (Installation and Use) Regulations 1998 and ERE Regulations.

SMOKE DETECTION

Mains operated linked smoke alarm detection system to BS EN 14604 and BS5839-6:2004 to at least a Grade D category LD3 standard and to be mains powered with battery back up. Smoke alarms should be fitted so that there is a smoke alarm in the circulation spaces on all levels above and within 7.5m of the door to every habitable room. If ceiling mounted they should be 300mm from the walls and light fittings. Where the kitchen area is not separated from the stairway or circulation space by a door, there should be an interlinked heat detector in the kitchen.

SAFETY GLAZING

All glazing in critical locations to be toughened or laminated safety glass to BS 5206, BS EN 14179 or BS EN ISO 12543-1:2011 and Part K (Part M in Wales) of the current Building Regulations, i.e. within 1500mm above floor level in doors and side panels within 300mm of door opening and within 800mm above floor level in windows.

NEW AND REPLACEMENT WINDOWS

New and replacement windows to be double glazed with 16mm argon gas and soft coat (low-E) glass. Window Energy Rating to be rated C or better and to achieve U-Value of 1.6 W/m²K. The door and window openings should be limited to 25% of the extension floor area plus the area of any existing openings covered by the extension.

NEW AND REPLACEMENT DOORS

New and replacement doors to achieve a U-Value of 1.80 W/m²K. Glazed areas to be double glazed with 16mm argon gas and soft coat (low-E) glass. Glass to be toughened or laminated safety glass to BS 5206, BS EN 14179 or BS EN ISO 12543-1:2011 and Part K (Part M in Wales) of the current Building Regulations.

BACKGROUND AND PURGE VENTILATION

Background ventilation - Controlable background ventilation via trickle vents to BS EN 13141-3 within the internal frame to be provided to new habitable rooms at a rate of min 5000mm³ and to kitchens, bathrooms, WCs and utility rooms at a rate of 2500mm³. Purge ventilation - New Windows/door/ights to have operable areas in excess of 1200th of their floor area, if the window opens more than 30° or 1/10th of their floor area if the window opens less than 30°. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide.

EXTRACT TO BATHROOM

Bathroom to have mechanical vent ducted to external air to provide min 15 litres / sec extraction. Vent to be connected to light switch and to have 15 mins over run if no window in room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

RAINWATER DRAINAGE

New rainwater goods to be new 110mm UPVC half round gutters taken and connected into 80mm dia UPVC downpipes. Rainwater taken to new soakaway, situated a min distance of 5.0m away from any building, via 110mm dia UPVC pipes surrounded in 150mm granular fill. Soakaway to be min of 1 cubic metre capacity (or to depth to Local Authorities approval) with suitable granular fill and with geotextile narrowed to prevent migration of fines. If necessary carry out a percolation test to determine design and depth of soakaway.

LEAD WORK AND FLASHINGS

All lead flashings, any valley or soakers to be Code 5 lead and lead according to Lead Development Association. Flashings to be provided to all janes and below window openings with leaded upstands. Joists to be spaced min 150mm and lead to be dressed 200mm under linels, etc. All work to be undertaken in accordance with the Lead Development Association recommendations.

MEANS OF ESCAPE - FIRE DOORS

Form a protected escape stairway by providing half hour fire resistance to all partitions as well as floors and ceilings above and below rooms. Stairway to be protected at all levels - from the loft rooms/rooms then leading directly to an external door at ground level (no inner rooms allowed). All doors on to the stairway must be FD30 rated fire doors to BS 476-22:1987 or the European equivalent BS EN 1334 (fitted with intumescent strips related around sides & top of door or frame if required by ECOC). Where applicable, any glazing in fire doors to be half hour fire rating and glazing in the walls forming the escape route doors must to have 30 minutes fire resistance and be at least 1.7m above the floor level or stair pitch line.

UPGRADE OF EXISTING CEILINGS

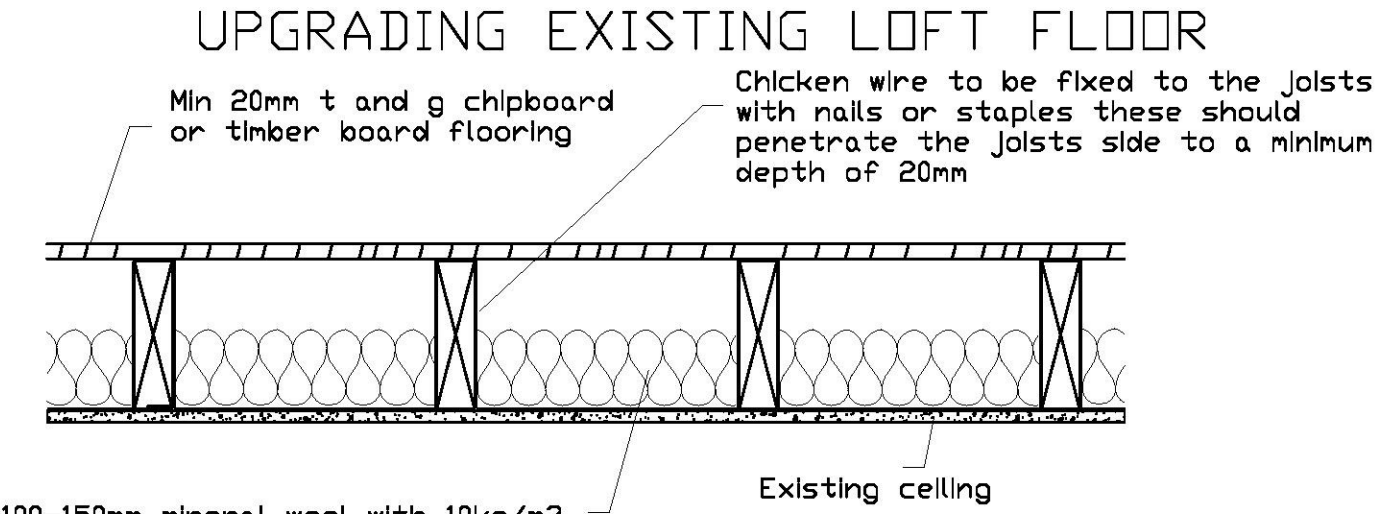
Intermediate floor to be upgraded by the provision of 100mm Rockwool mineral fibre quilt insulation min 10kg/m³ or equivalent between floors joists. Ceiling to be 12.5mm plasterboard with a minimum mass of 10 kg/m² with skim plaster and finish. Ensure the existing timber flooring of the room above has a minimum mass of 15 kg/m².

NEW EXTERNAL DOORS

New external doors to achieve a U-Value of 1.80 W/m²K. Glazed areas to be double glazed with 16mm argon gas and soft coat (low-E) glass. Glass to be toughened or laminated safety glass to BS 5206, BS EN 14179 or BS EN ISO 12543-1:2011 and Part K (Part M in Wales) of the current Building Regulations.

TYING 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 wall provides a movement joint with vertical dpc. All tied into existing construction with suitable proprietary stainless steel profiles connected to the existing wall and tied centrally to the proposed new/bro/ between at 450 centres.

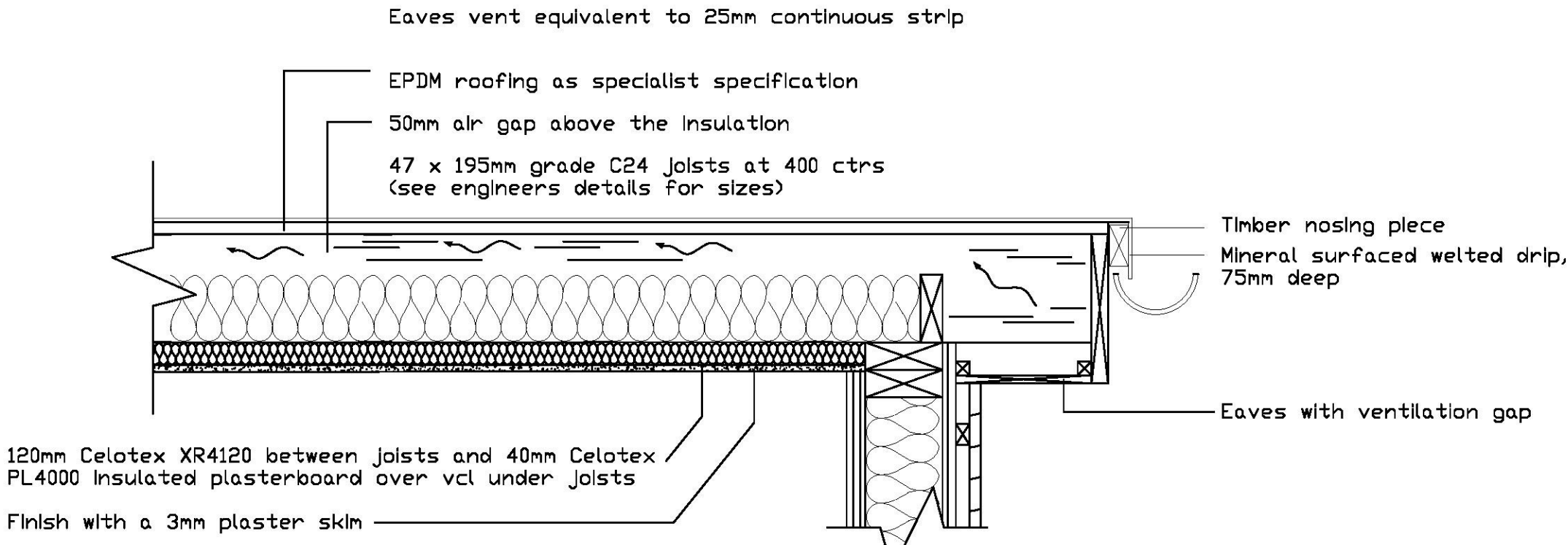


100-150mm mineral wool with 10kg/m³ density laid between existing joists on chicken wire as required by building control

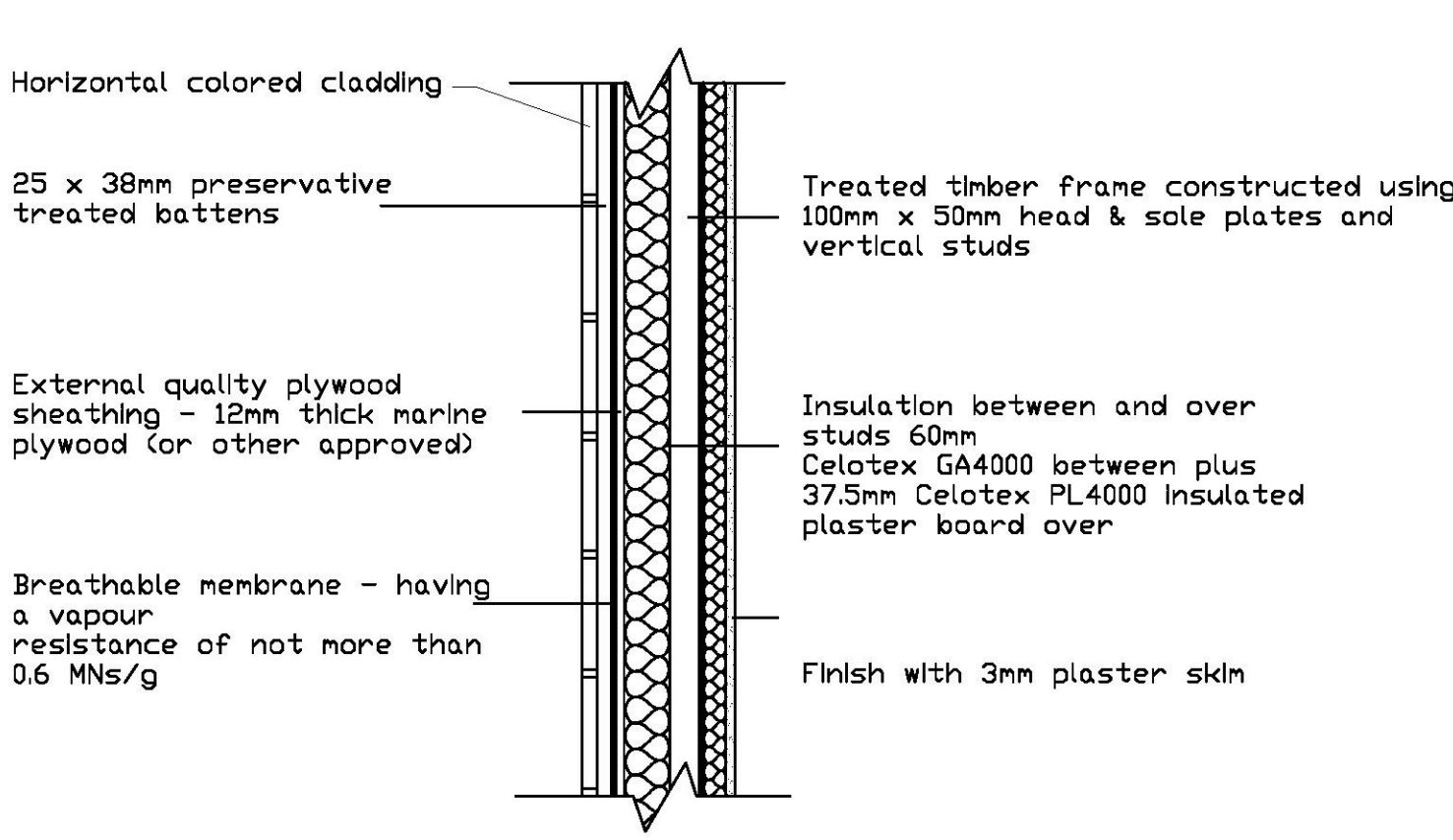
UPGRADE OF EXISTING FLOORS

Ensure first floor achieves modified half-hour fire resistance. New second floor - Joists to be 50mm minimum from chimney breasts. (joist size to structural engineer's details and calculations) Provide min 20mm t and g chipboard or timber board flooring. In areas such as kitchens, utility rooms and bathrooms flooring to be moisture resistant grade in accordance with BS EN 312.2010). Identification marking must be laid upper most to allow easy identification. To upgrade to half hour fire resistance and provide adequate sound insulation lay minimum 150mm Rockwool insulating material or equivalent on chicken wire between joists and extended to eaves. Chicken wire to be fixed to the joists with nails or staples these should penetrate the joists side to a minimum depth of 20mm, in accordance with BRE-Digest 208 1988. Joists spans over 2.5m to be strutted at mid span use 38 x 38mm herringbone strutting or 38mm solid strutting (at least 2/3 of joist depth). Provide lateral restraint where joists run parallel to walls. Floors are to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps or other approved in compliance with BS EN 845-1 at max 2.0m centres, straps to be taken across minimum 3 no. joists. Straps to be built into walls. Provide 38mm wide x 3/4 depth solid noggins between joists at strap positions.

COLD FLAT MEMBRANE ROOF / TIMBER FRAMED WALL



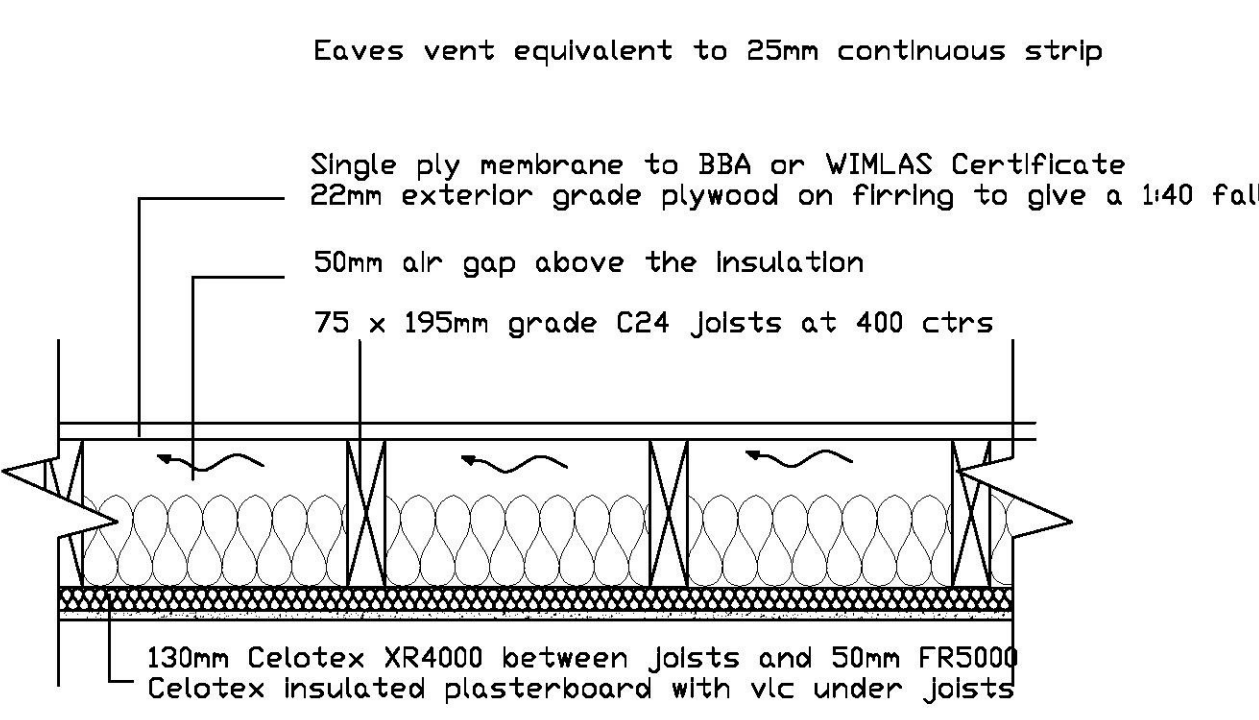
100mm TIMBER FRAMED WALL



TIMBER FRAME WALL

To achieve minimum U Value of 0.28W/m²K. Horizontal cladding on 25 x 38mm preservative-treated battens (provide counter battens to ensure vented and drained cavity if required) fixed to breathable membrane (having a vapour resistance of not more than 0.6 MNs/g) and 12mm thick WBP external quality plywood sheathing (or other approved). Ply fixed to treated timber frame studs constructed using: 100mm x 50mm head & sole plates and vertical studs (with noggins) at 400mm ctrs or to s/engineer's details & calculations. Insulation to be 60mm Celotex GA4000 between studs plus 37.5mm Celotex PL4000 insulated plasterboard with VCL over. 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.

COLD FLAT MEMBRANE ROOF



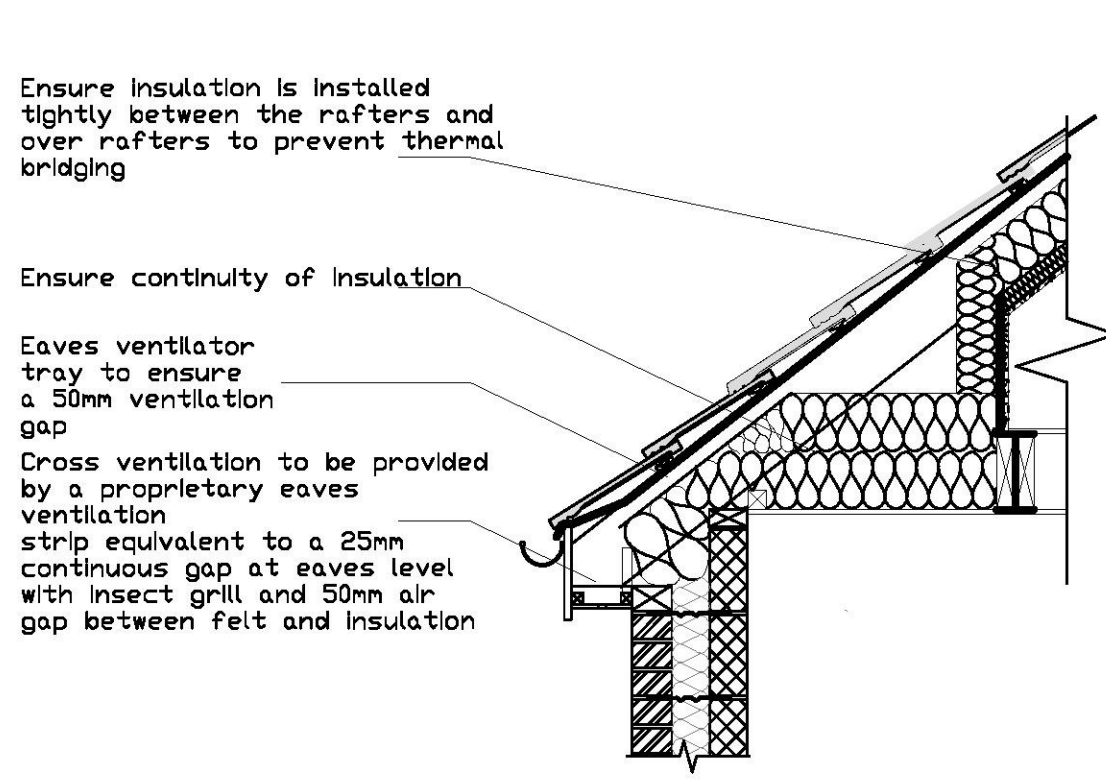
VENTILATED FLAT ROOF

(imposed load max 1.0 kN/m² - dead load max 0.75 kN/m²) To achieve U value of 0.15 W/m²K. Flat roof to be single ply membrane roofing with aa fire rating as specialist specification, with a current BBA or WIMLAS Certificate on 22mm exterior grade plywood, laid on firrings to give a 1:40 fall on 75 x 195mm grade C24 joists at 400 ctrs. Cross-ventilation to be provided on opposing sides by a proprietary eaves ventilation strip equivalent to 25mm continuous ventilation, with fly proof screen. Flat roof insulation is to be continuous with the wall insulation but stopped back to allow a continuous 50mm air gap above the insulation for ventilation. Insulation to be 130mm Celotex XR4000 between joists and 50mm Celotex FR5000. Finish with 12.5mm plasterboard over vapour barrier with a 3mm plaster skim. Provide cavity tray where pitched roof meets existing wall. Provide restraint to flat roof by fixing using of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall. Workmanship to comply to BS 8000: 4.

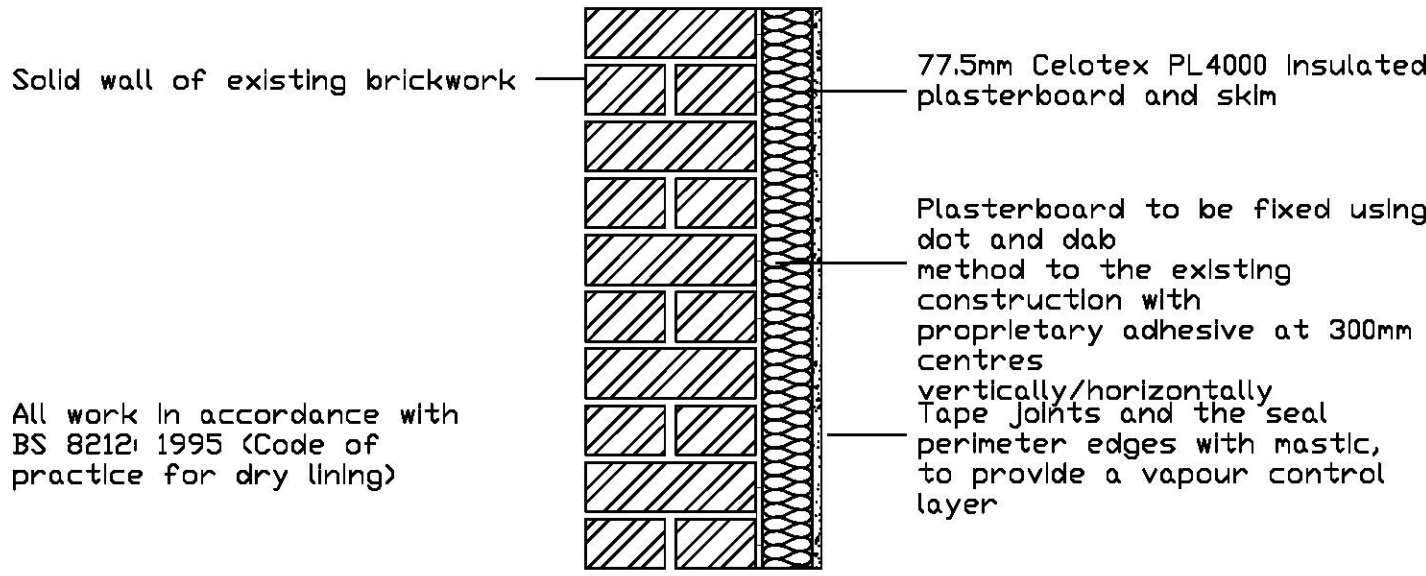
FLAT ROOF RESTRAINT

100m x 50mm C16 grade timber wall plates to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps at maximum 2.0m centres fixed to internal wall faces.

EAVES DETAIL FOR LOFT CONVERSION



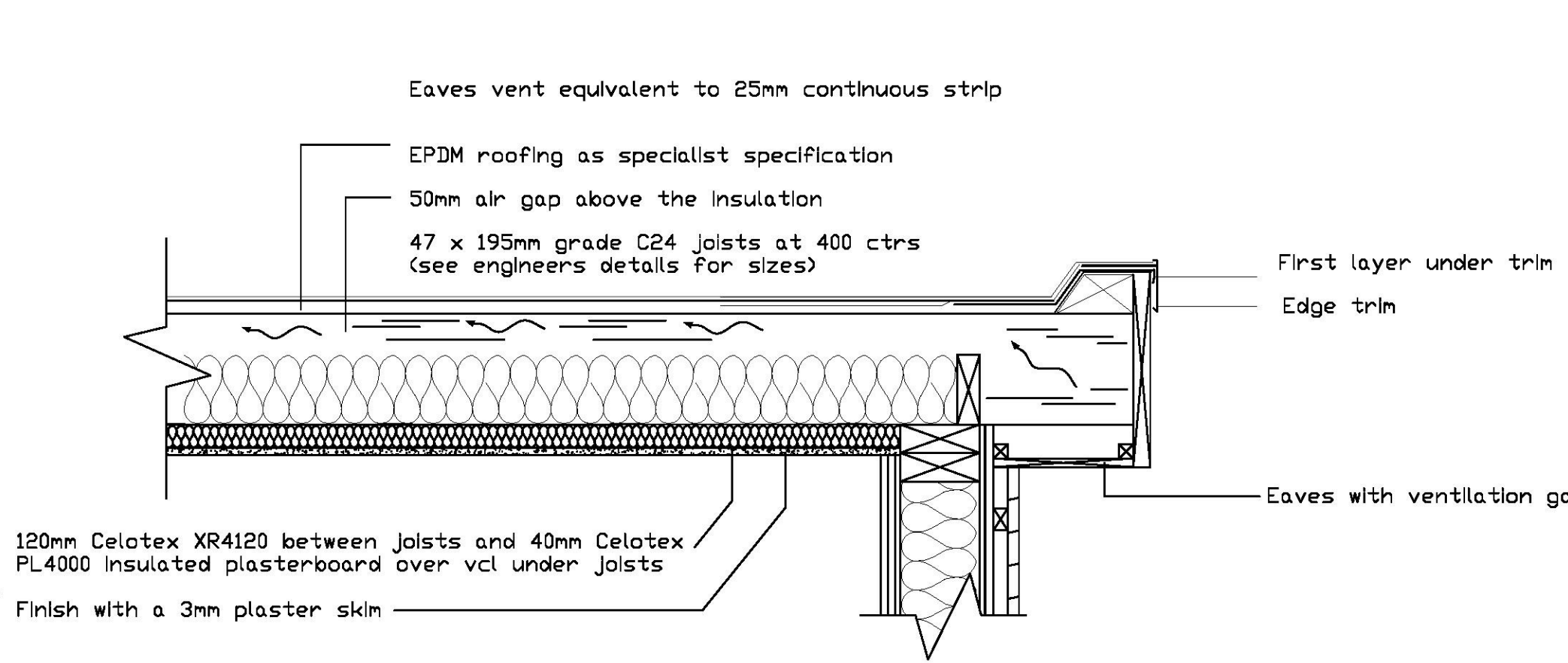
UPGRADING 225mm SOLID PARTY WALL (Cold adjoining space)



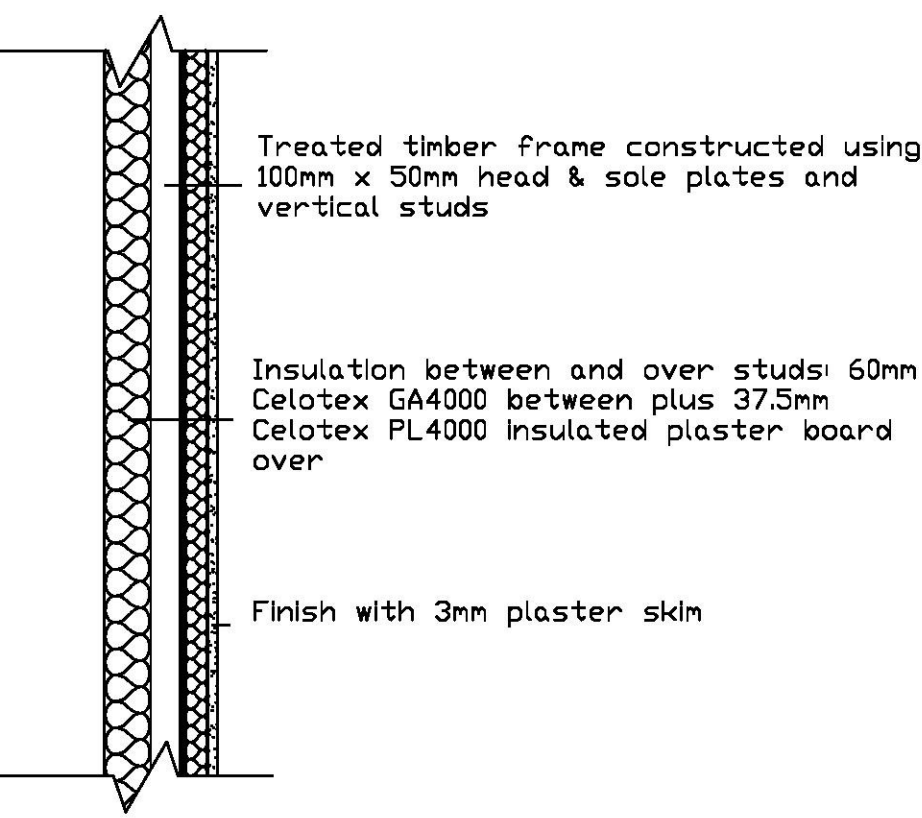
UPGRADING SOLID PARTY WALL (cold adjoining space)

The existing walls must be checked for stability and be free from defects as required by the Building Control Officer. Provide a scratch coat render to existing wall. Insulate wall on the warm side using 77.5mm Celotex PL4000 insulated plasterboard. Plasterboard to be bonded, using dot and dab method, to the existing construction with proprietary adhesive at 300mm centres vertically/horizontally and in accordance with manufactures instructions. Tape joints and seal perimeter edges with mastic, to provide a vapour control layer (VCL). All work in accordance with BS 8212: 1995 (Code of practice for dry lining).

COLD FLAT MEMBRANE ROOF / TIMBER FRAMED WALL



ASHLAR/DWARF WALLS



STUD ASHLAR/DWARF WALL

To achieve minimum U Value of 0.28W/m²K. Construct stud wall using 100mm x 50mm head and sole plates and vertical studs (with noggins) at 400mm centres or to structural engineer's details and calculations. Insulation between and over studs; 60mm Celotex GA4000 between plus 37.5mm Celotex PL4000 insulated plasterboard with VCL. 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.

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job:
New Extension

drawing title:
As Shown

date:
8th October 2019

scale:
As Shown@A1

drawing number:
19-0488 D05