

EXTENSION BUILDING REGULATIONS NOTES 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. CDM REGULATIONS 2015 The client must abide by the Construction Design and Management Regulations 2015. The client must appoint a contractor, if more than one contractor is to be involved, the client will need to appoint (in writing) a principal designer (to plan, manage and coordinate the planning and design work) and a principal contractor (to plan, manage and coordinate the construction and ensure there are arrangements in place for managing and organising the project). Domestic clients The domestic client is to appoint a principal designer and a principal contractor when there is more than one contractor, if not your duties will automatically transferred to the contractor or principal contractor. The designer can take on the duties, provided there is a written agreement between you and the designer to do so. The Health and Safety Executive is to be notified as soon as possible before construction work starts if the works: (a) Last longer than 30 working days and has more than 20 workers working simultaneously at any point in the project. Or (b) Exceeds 500 person days 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). Reasonable 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 Certification of Schemes (Kite Marks) etc. Products conforming to a European technical standard or harmonised European product should have a CE marking. 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. 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 EPRC certification Ltd, BS, NICEIC Certification Services or Zurich Ltd. An appropriate BS7671 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 take lamps having a luminous efficiency better than 80 lumens per candle watt. All fixed to have lighting capacity (lm) 185 x total floor area, 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 TVRs 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 IEE Regulations. OPENINGS AND RETURNS An opening or recess greater than 0.1m² shall be at least 550mm from the supported wall (measured internally) construction for pier less than 550mm to be specified by engineer. SAFETY GLAZING All glazing in critical locations to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1:2011 and Part K (Part N 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 gap and soft low-E glass. Window Energy Rating to be Band C or better and to achieve U-value of 1.4 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 1.40 W/m²K. Glazed areas to be double glazed with 16mm argon gap and soft low-E glass. Glass to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1:2011 and Part K (Part N in Wales) of the current Building Regulations. BACKGROUND AND PURGE VENTILATION Background ventilation - Controllable background ventilation via trickle vents to BS EN 13141-3 within the window frame to be provided to new habitable rooms at a rate of min 8000mm³ and to kitchens, bathrooms, WCs and utility rooms at a rate of 4000mm³ Where an open plan kitchen diner is proposed, a minimum of 3 trickle vents are necessary within the room (each 8000mm³). Purge ventilation - New Windows/rooftlights to have operable area in excess of 1/20th 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. NEW EXTERNAL DOORS New external doors to achieve a U-Value of 1.40 W/m²K. Glazed areas to be double glazed with 16mm argon gap and soft low-E glass. Glass to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1:2011 and Part K (Part N in Wales) of the current Building Regulations. LINTELS For uniformly distributed loads and standard 2 storey domestic loadings only Lintel widths are to be equal to wall thickness. All lintels over 750mm sized internal door openings to be 65mm deep pre-stressed concrete plank lintels. 150mm deep lintels are to be used for 900mm sized internal door openings. Lintels to have a minimum bearing of 150mm on each end. Any existing lintels carrying additional loads are to be exposed for inspection at commencement of work on site. All pre-stressed concrete lintels 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 5896 to support loadings assessed to BS 5977 Part 1. For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufacturers standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels. 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 abuts the existing walls provide 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 brick blockwork at 450 centres. 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 (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 5628 Code of practice for use of masonry. EXTRACT TO UTILITY ROOM To utility room provide mechanical ventilation ducted to external air capable of extracting at a rate of 30 litres per second. 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. Interim extract fans to BS EN 13141-4. Cooker hoods to BS EN 13141-3. 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. EXTRACT TO KITCHEN Kitchen to have mechanical ventilation with an extract rating of 60lit/sec or 30lit/sec if adjacent to hob to external air, sealed to prevent entry of moisture. 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. Interim extract fans to BS EN 13141-4. Cooker hoods to BS EN 13141-3. 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. STRAPPING FOR PITCHED ROOF Gable 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 screw fixed. Provide solid nogging 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 1000mm galvanised metal straps or other approved to BS EN 845-1 at maximum 2m centres. LEAD WORK AND FLASHINGS All lead flashings, any valleys or soakers to be Code 5 lead and laid according to Lead Development Association. Flashings to be provided to all jumbs and below window openings with welded upstands. Joints to be lapped min 150mm and lead to be dressed 200mm under tiles, etc. All work to be undertaken in accordance with the Lead Development Association recommendations. UNDERGROUND FOUL DRAINAGE Underground drainage to consist of 100mm diameter UPVC proprietary pipe work to give a 1:40 fall. Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (600mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide rodding access at all changes of direction and junctions. All below ground drainage to comply with BS EN 14011-1: 2005. AUTOMATIC AIR VALVE Ground floor fittings from WC to be connected to new 110mm UPVC soil pipe with accessible internal air admittance valve complying with BS EN 12380, placed at a height so that the outlet is above the trap of the highest fitting and connected to underground quality drainage encased with pea gravel to a depth of 150mm. ESCAPE WINDOWS / DOORS Provide emergency egress windows / doors to any ground floor inner rooms. Windows to have an unobstructed operable area of 400mm high x 450mm wide, minimum 0.33m². The bottom of the operable area should be not more than 1100mm above the floor. The window should enable the person to reach a place free from danger from fire. 1 STRIP FOUNDATION DPC 150mm above ground level Outer skin Inner skin Lean mix cavity fill 225mm below DPC 225mm x 600mm concrete foundation. Concrete mix to conform to BS EN 206-1. Depth to be 1000mm deep depending on ground conditions to be agreed with BCO Eccentric foundation if needed due to Structural Engineer details Provide 225mm x 600mm concrete foundation, concrete mix to conform to BS EN 206-1 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 8004:1986 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. 3 STANDARD PARTIAL FILL BRICK CAVITY WALL Walls to be built with 1:1:6 cement mortar 103mm facing brick Stainless steel retaining wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm ctrs at reveals and corners in staggered rows Horizontal strip polymer (hyload) damp proof course to both leaves minimum 150mm above external ground level Cavity wall skins -100mm medium block (0.45 W/m²K) 100mm Celotex CW4000 insulation fixed to internal leaf Alternative insulations: 100mm Ecotherm Eco-Cavity 80mm Kingspan Kooltherm Internal finish 12.5mm lightweight plaster or plasterboard on dabs PARTIAL FILL CAVITY WALL To achieve minimum U Value of 0.18 W/m²K Provide 103mm suitable facing brick. Ensure a 50mm clear residual cavity and provide 100mm Celotex CW4000 insulation fixed to internal leaf constructed of 100mm, 0.45 W/m²K standard block. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1:6 cement mortar. 2 SOLID GROUND FLOOR DPC 150mm above ground level lapped to DPM 65mm concrete sand cement screed with light reinforcement A VCL should be laid over and under the insulation 100mm Celotex GA4000 insulation 100mm thick concrete slab 1200g damp proof membrane 150mm sand sealed hardcore SOLID FLOOR INSULATION OVER SLAB To meet min U value required of 0.18 W/m²K P/A ratio 1.0 Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. 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 100mm thick Celotex GA4000. 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. 4 COLD PITCHED ROOF Roofing tiles 25 x 38mm tanalised sw treated battens Breathable membrane to BS747 or relevant BBA Certificate draped 20mm 50 x 150mm grade C24 rafters at max 400mm centres Cross ventilation to be provided by a proprietary eaves ventilation strip equivalent to a 25mm continuous gap at eaves level with insect grill Ceiling joists 50 x 150mm grade C24 at 400mm centres 140mm XR4000 Celotex between ceiling joists and 40mm TB4000 Celotex over Polythene vapour barrier between insulation and plasterboard Finish with 12.5mm plasterboard and skim coat of finishing plaster EAVES DETAIL Cavity barrier / fire stop (50mm thick wire reinforced rock mineral wool) Cross ventilation to be provided by a proprietary eaves ventilation strip equivalent to a 25mm continuous gap at eaves level with insect grill WINDOW HEAD AND LINTEL External leaf Polyurethane foam insulation Weep holes (min 2 per lintel at 450mm centres) Joint filled with polyethylene foam and sealant pointing Ensure masonry overhang does not exceed 25mm Lintel drip to project forward of the frame Window frame and glazing to architects specification Internal Leaf 50mm clear residual cavity, 100mm Celotex CW4000 insulation fixed to innerleaf Cavity tray with stop ends Lintel to have a nominal 150mm bearing at each end Ensure lintel is fully bedded on bricklaying mortar Window head - overlapping insulation at least 25mm to prevent thermal bridge WINDOW SILL Bed window on impregnated foam strip Sill to overhang blockwork by 50mm Dpc External leaf Proprietary insulated cavity closer Continuous ribbon of plaster adhesive Suitable plasterboard Internal leaf 50mm clear residual cavity, 100mm Celotex CW4000 insulation fixed to innerleaf WINDOW REVEAL (Plan) Thermal break of insulating foam with sealant pointing Window frame and glazing as specified by architect Continuous plaster dab in keys Continuous plaster dab around corner Dpc (where required) should protrude into the cavity by 25mm Proprietary insulated cavity closer to avoid thermal bridge Provide a minimum overlap of 30mm between the window frame and the cavity closer 74 Cardiff Road, CF15 7QE • Enquiries@ArkiPlan.co.uk Site Eastcote, Royston Road, Baldock SG7 6QZ Date 18.02.2026 Sheet 23-1054 D08 REV 2 Job New Extension Scale Not To Scale Title Number HD416279 Title Specification & Section Detail Drawings 1:10
