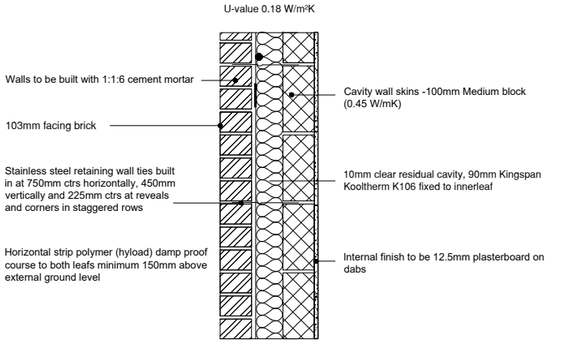
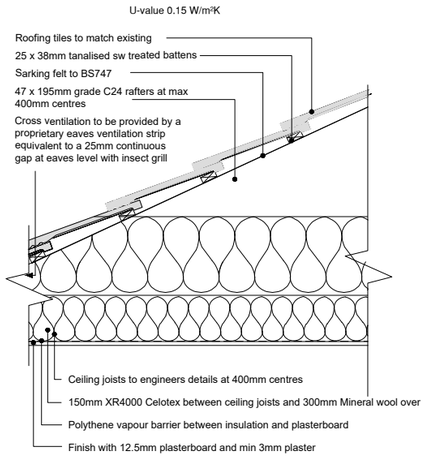
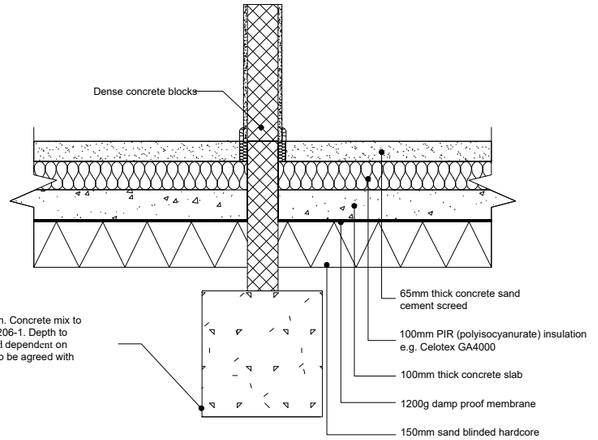


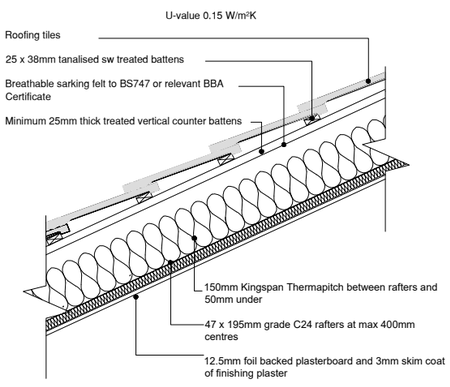
EXTERNAL WALL
1:5



CEILING ROOF
1:5



INTERNAL LOAD BEARING WALL
1:5



VAULTED ROOF
1:5

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).

HEALTH AND SAFETY
The contractor is reminded of their liability to ensure due care, attention and consideration is given in regard to safe practice in compliance with the Health and Safety at Work Act 1974.

FULL RADON PROTECTION: IN-SITU (GROUND-SUPPORTED) CONCRETE FLOOR
Floor slab to be reinforced concrete slab designed by structural engineer and supported on the inner leaf of the cavity wall on 150mm consolidated well-rammed hardcore.
Provide a 1600g (400 micrometre) continuous polythene DPM radon-proof barrier over the slab, lapped & sealed at all joints, around service penetrations with radon gas proof tape & linked to DPC's in the cavity wall.
Provide a radon sub floor sump, depressurization pipe with up stand beneath the floor slab as sump manufacturers' details. Radon test to be undertaken if required by building control after completion, and if unacceptably high levels of radon are found, provide an electrically powered fan to the pipework.
80mm PIR insulation over DPM and 75mm reinforced concrete slab.
See BRE GBG 73

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.

OPENINGS AND RETURNS
An opening or recess greater than 0.1m² shall be at least 550mm from the supported wall (measured internally).

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 with 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 and BS EN 845-1.

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.

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.
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.

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 BRE certification Ltd, BSI, 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
Internal energy efficient light to be fitted as calculated within the dwelling primary energy rate and dwelling emissions rate for account for the efficacy of lamps.
Provide low energy light fittings lamps with a luminous efficacy better than 80 lamp lumens per watt.
All fixed lighting to have lighting capacity (lm) 185 x total floor area.

NEW GAS BOILER
Heating and hot water will be supplied via a wall mounted condensing vertical balanced flue pressurised boiler with a minimum efficiency of 92% (as defined in ErP) and boiler control interlocks.
Each room to be fitted with thermostatic radiator valves and all necessary zone controls.
Energy-Related Products Directive for Standard Assessment Procedure modelling, SEDBUK values to be used.
The energy performance of the new components to be assessed. The results to be recorded and given to the building owner.
All pipes to be insulated to the standards in Table 4.4 Approved Document L.
All parts of the system including pipework and emitters should be sized to allow the space heating system to operate effectively and in a manner that meets the heating needs of the dwelling, at a maximum flow temperature of 55°C or lower.
The system will be installed, commissioned and tested by a GAS SAFE Registered Specialist and a certificate issued to demonstrate that the installation complies with the requirements of Part L. Carbon monoxide alarm to be positioned near boiler.
Boiler flue to be installed in accordance with Approved Document J, British Gas requirements and manufacturer's guidance. Flues to be terminated externally with metal terminal guard and positioned a minimum of 600mm away from any openings into the building. Where the flue passes through a wall, floor or roof, enclose in a non-combustible sleeve. Where the flue is within a void provide appropriate and sufficiently sized access to allow inspection of the flue. No combustible materials to be within 50mm of the flue.
Provide new metered gas supply to the dwelling. All works to comply with gas authority standards. 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.

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.

DOORS
Doors to achieve a U-Value of 1.4 W/m²K. Glazed areas to be double glazed with 16-20mm 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.
Insulated plasterboard to be used in reveals to abut jambs and to be considered within reveal soffits.
Fully insulated and continuous cavity closers to be used around reveals.
Windows and door frames to be taped to surrounding openings using air sealing tape.

KITCHEN AND EATING AREA
The worktop in the kitchen to include a continuous section that incorporates a combined sink and drainer unit and a hob.

SERVICES AND CONTROLS
Switches to be between 1350mm and 1450mm above floor level.
Light switches are to be on individual plates (unless wide rocker or full plate fittings are provided)
Switches to double socket outlets should be at the outer ends of plate.
Switches, sockets, stopcocks and controls, to be positioned so their centre line is 700-1000mm above floor level and a minimum of 700mm (measured horizontally) from an inside corner, and are not to be placed behind appliances.
Kitchen appliances to have isolators located within the same height range.
Boiler timer controls and thermostats to be 900-1200mm above finished floor level on the boiler, or elsewhere within the same height range.
Radiator controls to be 450-1000mm above floor level.

THE SINK
- The sink to be not more than 150mm deep with insulation to the underside to prevent scalding of a wheelchair user's legs. Water supply to sinks to include isolation valves and flexible tails.
- Taps to be lever operated and capable of easy operation.
- Drainage to be either flexible, or fixed but easily adaptable to suit worktop heights between 700mm and 900mm above finished floor level.
- WORKTOPS ETC
- A minimum 2200mm long section of worktop either a height adjustable, or a fixed section capable of being refixed at alternate heights to be provided. No fixed white goods (appliances) to be positioned beneath this section of worktop and a clear and continuous open leg space underneath (capable of achieving a minimum 700mm clearance above floor level) to be provided.
- A suitable space to be provided for a built-in oven (with its centre line between 800mm and 900mm above floor level) with a pull out shelf provided beneath the oven enclosure.
- Worktop to have a minimum of 400mm to at least one side of the oven and fridge or fridge freezer where this is taller than the worktop height (or to one side of a pair of tall appliances where they are located together at the end of a run).

FIRE SAFETY
Suitable and sufficient fire risk assessment of the premises to be carried out in accordance with article 9 of the Regulatory Reform (Fire Safety) Order 2005. The documentation and any necessary safety measures to be in place on the first day that the building is occupied. All doors on escape routes whether fire doors or not to be fitted with simple fastenings easily openable without the use of a key at all times the building is occupied. An emergency lighting system to be installed in accordance with BS 5266: Part 1: 2016 or equivalent acceptable standard. An automatic sprinkler system to be installed in accordance with BS EN 12845:2004+A2:2009 or equivalent acceptable standard.

EXTRACT TO WC
WC to have mechanical ventilation ducted to external air with an extract rating of 6l/s operated via the light switch. Vent to have a 15min overrun if no window in room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. 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.

EXTRACT TO KITCHEN
Kitchen to have mechanical ventilation with an extract rating of 60l/sec or 30l/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. Intermittent extract fans to BS EN 13141-4. Cooker hood 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. Height of Cooker hood to be as manufacturer's specification or between 650mm and 750mm

REG 40 AND 40A PROVIDING INFORMATION
On completion of the works the owner of the dwelling shall be provided with:
- Information about the fixed building services and on-site electricity generation and their operating and maintenance instructions, including timing and temperature control settings.
- A recommendations report generated with the 'on-construction energy performance certificate
- A signed copy of the Building Regulations England Part L compliance report (BREL).
Information to be easy to understand and in an accessible format.

CONTINUITY OF INSULATION AND THERMAL BRIDGING
The building fabric to be constructed so that the insulation is reasonably continuous across newly built elements.
Drawings to be provided for junctions to prevent thermal bridging, guidance in Building Research Establishment's BR 497 or other independently assessed thermal junction details to be followed.
Before elements are concealed, photographs of the details and an on-site audit to be undertaken to confirm that the designed details have been constructed in line with the guidance in Appendix B.

REGULATION 25A: CONSIDERATION OF HIGH EFFICIENCY ALTERNATIVE SYSTEMS
Analyse of the use of high efficiency alternative systems to be undertaken. Taking into account the technical, environmental and economic feasibility of the provision of such systems.
A copy of the analysis to be available for inspection by building control to on request.
The document to state whether high-efficiency alternative systems have been included in the dwelling design.

REG 44 AND 44ZA – COMMISSIONING OF FIXED BUILDING SERVICES
All fixed building services to be commissioned and a commissioning plan to be produced identifying:
- systems that need to be tested.
- how these systems will be tested.
Commissioning plan to be given to the building control body with the design stage dwelling primary energy rate, dwelling emissions rate and dwelling fabric energy rate calculation.
At completion commissioning certificate to be given to the building control body confirming that the commissioning plan has been followed and that all systems have been inspected and conform with the design requirements.

LIMITING HEAT LOSSES AND GAINS
In accordance with Approved Document L
Insulation to be provided to:
- Primary circulation pipes for hot water.
- Primary circulation pipes for heating circuits where they pass outside the heated space and voids to be insulated.
- Pipes connected to hot water storage vessels for at least 1m from the point at which they connect to the vessel.
Secondary circulation pipework.

APPENDIX B: REPORTING EVIDENCE OF COMPLIANCE
BREL report
The Building Regulations England Part L (BREL) report and photographic evidence to be provided to building control and to the building owner.
Photographs to show thermal continuity and quality of insulation to be made available to the energy assessor and building control. One photograph per detail to be provided of the following details:
- At ground floor perimeter edge insulation
- At external door threshold
- Below damp-proof course on external walls
- Ground floor to wall junction
- Structural penetrating elements
- Joist/rafter level
- Eaves and gable edges
- Window positioning in relation to cavity closer or insulation line
- External doorset positioning in relation to cavity closer or insulation line
- Air tightness details where required
- Plant/equipment identification labels, including make/model and serial number
- Primary pipework and continuity of insulation
- Mechanical ventilation ductwork continuity of insulation (for duct sections outside the thermal envelope)
Each image file name to confirm location, date and time and to have a plot number and detail reference.

ACCESSIBLE LEVEL DOOR THRESHOLDS INTO THE BUILDING
Entrance door to have an accessible level threshold provided with a weather bar (maximum height 15mm) with suitable drainage channel. Landings to have a fall of 1:40-1:60 away from the door.
Principal entrance door to have a minimum 775mm clear opening between the door leaf and doorstops.

C2. CONDENSATION
Walls, floors and roof of the building to be designed and constructed so that their structural and thermal performance will not be adversely affected by interstitial condensation, surface condensation or mould growth. Account to be taken of the building's form and orientation in relation to topography, prevailing winds, sunlight and over-shadowing, and the rate at which humidity is generated.
Materials with the highest vapour resistance should be located on the warm side of a thermal element. VCLs to be provided where necessary.
The junctions between elements are designed to Accredited Construction Details or guidance of BRE IP17/01] and BS 5250:2011+A1:2016 Code of practice for control of condensation in buildings to be followed.

CONTROL OF WATER TEMPERATURE
The installation of the hot water supply to comply with Approved Document G3. All baths and showers are to be fitted with an inline thermostatic mixing valve to ensure that the temperature of the water delivered to the bath is limited to 48°C.

OVERHEATING MITIGATION
Adequate means of removing excess heat and limiting solar gains to be provided.
Compliance to be demonstrated by using either:
- The simplified method for limiting solar gains and providing a means of removing excess heat as set out in Section 1 of Approved Document O. Compliance check list (AD O Appendix B) to be provided to demonstrate compliance, or
- The dynamic thermal modelling method as set out in section 2 of Approved Document O, using the guidance set out in - CIBSE TM59 methodology for predicting overheating risk.
Report to be provided that demonstrates that the building passes CIBSE's TM59 assessment of overheating. Consideration given to provision of adequate daylight as detailed in BS 8206 -2 Code of Maintaining Adequate Level of Daylight, noise pollution and security.

Solar gains in summer to be limited by any of the following means:
a. Fixed shading devices, comprising any of the following.
i. Shutters.
ii. External blinds.
iii. Overhangs.
iv. Awnings.

APPROVED DOCUMENT R
Physical infrastructure for high-speed electronic communications networks

Building to be equipped with high-speed-ready in-building physical infrastructure, up to a network termination point for high-speed electronic communications networks.
So that copper or fibre-optic cables or wireless devices capable of delivering broadband speeds greater than 30 Mbps can be installed. A suitable position for at least one network termination point should be provided for as well as a suitable access point

FIXED EXTERNAL LIGHTING
Install low energy light fittings that only take lamps having a luminous efficiency better than 80 lumens per circuit watt.
External light fittings to have both the following:
- Automatic controls which switch luminaires off in response to daylight
- If luminous efficacy is 75 light source lumens or less automatic controls which switch luminaires off after the area lit becomes unoccupied, if luminous efficacy is greater than 75 light source lumens, manual control can be installed.

NOTES -

Drainage subject to a visit by the builder and assessment of existing drains.

Party wall act may be required and is the responsibility of the homeowner, we can advise if required.

Please review our Terms and Conditions on our website www.binneyandsimsdesign.co.uk

Site plans and Location plans purchased from streetwise.net and are subject to their terms and conditions.

Drawings are for planning purposes only.

Prior to commencement of works the contractor is responsible for checking the plans to the site conditions. If any anomolies are found they are reported for rectification. Failure to do so at this stage will result in the contractor being liable for resulting costs incurred.

Drawings are subject to structural engineering and building control.

Client:

Little Paxton Parish Council

Site Address:

Village Hall Car Park
Little Paxton
St Neots
PE19

Drawn By: *SR*

Date : 23rd May 2023

Drawing No:730/3 Building Regulations Continued

BinneySims