

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.

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.

BEAMS

Supply and install new structural elements such as new beams, roof structure, floor structure, bearings, and padstones in accordance with structural drawings and calculations New steel beams to be encased in 125mm Gyproc Fireline board with staggered joints, Gyproc FireCase or painted in Nullifire S or similar intumescent paint to provide 1/2 hour fire resistance as agreed with Building Control. All fire protection to be installed as detailed by specialist manufacturer.

TRENCH FILL FOUNDATIONS

450mm wide by 1000mm min deep from existing or reduced ground level, centreline of foundations set as shown on detail, final foundation depths to be agreed on site with building inspector before concrete is poured. Concrete mix to be GEN3 grade. All walls below ground level to be in FL quality brickwork to BS 3921 including facings in external walls or dense concrete foundation blocks with a min density of 1500kg/m³. 225mm Below DPC as shown on section fill bottom of cavity wall with concrete, 225mm below lowest DPC, or alternatively use 300mm wide dense foundation block.

FLOOR FINISH

Main floor finish in these to be sealed at all external perimeters around the skirting boards with clear silicone sealant to minimise air leakage from the building. Final floor finish to clients requirements laid over 70mm Sand / cement Screed, reinforced in top with D49 steel mesh fabric (or use fibre reinforced screed), screed to be laid over 1000 Gauge continuous polythene vapour control membrane laid over 80mm thick PIR Insulation, min. 0.022 w/mK. Insulation to be laid over 1200 gauge damp proof polythene membrane laid over the top of the reinforced concrete slab, lap DPM at all perimeters / abutments with the DPC which is to be set min. 150mm above the finished ground level externally. Insulate at all perimeters / floor abutments with 25mm thick PIR Insulation upstands, min. 0.022 W/mK, to finish level with top of screed.

EXTERNAL CAVITY WALLS

300mm o/a thickness finished externally with facing brickwork laid in stretcher bond up to DPC. Painted weatherboard and render finish as shown on elevations above DPC. Both leaves of wall to sit on a 2000 Gauge 103mm wide DPC to BS 743 set 150mm above finished ground Level externally. Cavities to be closed around window/door jambs with fully insulated Cavity Closers to prevent cold bridging to jambs. Cavity wall insulation to be carried up the full extent of all walls and to extend below DPC to underside of floor slab insulation. Stainless steel twisted wall ties to BS 1243 spaced at 750 centres horizontally and 450mm centres vertically in a staggered pattern. Spacing increased to 225mm centres vertically at all openings. Ties to be bedded a minimum of 50mm into each leaf. Above DPC, 300mm overall wall thickness to be 100mm Blockwork, 100mm cavity with 100mm full fill Cavity Wall Batts, min 0.032W/mK Dritherm32 or similar approved product, and 100mm blockwork to internal leaf, min 0.15W/mK. Where weatherboard finish applies, fix weatherboard to 25X38SW treated vertical battens fixed to blockwork, finish battens top and bottom with insect mesh. Where render finish applies, Galvanised steel EML backed with building paper to be fixed to vertical battens, finished with 20mm thick 3 coat sand / cement render with a smooth painted finish, use galvanised steel angles beads at corners and render stop at lower bell cast edge. Walls to be finished internally with 12.5mm plasterboard on dabs with continuous ribbon of adhesive around all openings, along the top and bottom of the wall. Finish walls with a smooth plaster skim applied to plasterboard before decoration. Before any skirtings or covings are fixed, seal around all joints and corners with clear silicone sealant to minimise air leakage.

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 1500kg/m³ – 6m.
Dense concrete block – density exceeding 1500kg/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 13mm/to 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.

AIR LEAKAGE

To minimise air leakage throughout the building all joints at external walls are to be adequately sealed with clear mastic adhesive, i.e around skirting's, wall / ceiling abutments, windows and doors. All insulation vapour control and breather membranes to be installed strictly in accordance with manufacturers with all laps and joints suitably taped and sealed. Any penetrations made are to be adequately sealed in accordance with manufacturers guidelines. Service penetrations such as soil and vent pipes and vent outlets are to be sealed at penetrations with proprietary sealants. Any loft hatches to be provided with suitable draught stripping. Windows and doors to be manufactured to a high standard with draught stripping and sealant as necessary to minimise air leakage.

ROOF CONSTRUCTION

See structural drawings / roof truss manufacturers details for information. 47X100C16 Wallplate to be tied down with 30 x 5 galvanised M.S. restraint straps at max 1600mm centres plugged and screwed to inner wall face (minimum 3No fixings to wall with 50mm long No10 screws). Restraint straps required to gable ends fixed to inside face of cavity wall spanning over 3No rafters minimum, screwed to top of rafters. Roof to be finished with plain clay tiles to match existing, 3000 Half round clay ridge and clay bonnet hip tiles to be mechanically fixed to BS5536 on a mortar bed, valleys formed with Clay valley files, verges formed with a file undercloak. Use Code 4 lead flashing's, soakers and saddles at all abutments / roof penetrations in accordance with the Lead Sheef Association details / recommendations. Roof tiles to be fixed to 25X38SW treated filing battens at 100 centres fixed through BBA Approved waterproof breather roofing membrane fixed to top of rafters to manufacturers recommendations.

In flat ceiling areas Insulate between ceiling joists with 100mm mineral wool insulation min 0.044w/mK, with a further 150mm over the top laid in opposite direction to previous layer to achieve 250mm o/a thickness. Finish underside of ceiling with 12.5mm plasterboard fixed to underside of ceiling joists. Finish with a smooth plaster skim. Before decoration seal around all joints / corners with clear sealant to minimise air leakage.

Where sloping ceilings occur insulate between rafters with 100mm PIR Insulation ensuring a min 50mm ventilation gap is maintained over the top. Insulate under rafters with a further 50mm PIR fixed between 50x50 SW counter battens at max 600mm centres. Fix a 1000 gauge VCL to the underside of the insulation, joints lapped and taped. Fix 25x38 SW in-line service battens through VCL and finish slopes with 12.5mm plasterboard fixed to the underside of the rafters and finish with a smooth plaster skim. Before decoration seal around all joints / corners with clear sealant to minimise air leakage.

Rooflight upstands to be 47X100C16 studs at 400ctrs with 120mm fill PIR insulation between, finish internally with 1000 gauge gauge vapour control layer tightly to internal face of insulation, joints laped and taped. Finish walls internally with 12.5mm plasterboard with a smooth plaster skim finish. Before decoration seal around all joints / corners with clear sealant to minimise air leakage.

INTERNAL GROUND FLOOR WALLS

Ground floor internal walls are to be 100mm blockwork, built off ground bearing slab finished each side with a plaster skim finish over a dpleths to be agreed on site with building inspector before concrete is poured. Concrete mix to be GEN3 grade. All walls below ground level to be in FL quality brickwork to BS 3921 including facings in external walls or dense concrete foundation blocks with a min density of 1500kg/m³. 225mm Below DPC as shown on section fill bottom of cavity wall with concrete, 225mm below lowest DPC, or alternatively use 300mm wide dense foundation block.

ROOM VENTILATION

Openable ventilation is to be provided in all habitable rooms equal to at least 5% of floor area. The openable ventilation should not be less than 1750mm above the finished floor level.

TRICKLE VENTILATION

Provided in windows.

MINIMUM ROOM BACKGROUND VENTILATION

Habitable rooms – 8000mm²
Kitchens – 5000mm²
Bathrooms – 2500mm²
En – Suites – 2500mm²

MECHANICAL VENTILATION

Bathrooms / Ensuites / WC's – 15 U/sec light switch controlled which may be operated intermittently if a window opening is present. If no window opening is present mechanical extract to be provided with a 15 minute over run. All extracts to discharge through vented grill on external walls at ground floor (soffits where possible).

COMMISSIONING

All mechanical ventilation systems to be commissioned to measure air flow rates in accordance with an approved procedure, and to provide a notice recording the results and the data on which they are based in an approved manner to the building control body not later than five days after the final test is carried out. Commissioning of the ventilation systems to be carried out in the procedure given in tables 2, 6 and 8 (as applicable) and recorded in the manner as set out in Part 3 section 5 of the Domestic Ventilation Compliance Guide 2010 Edition.

WINDOWS

Windows to supply trickle ventilation to rooms as detailed above. Timber frame Casement windows. Where windows do not open, windows to be fixed sashes, not direct glazed. Double glazed units with an argon filled gap with low E glass sealed units achieving a U-value of 1.4 W/m2K or less secured to structure with window cramps or plugged and screwed. Seal around all windows internally with clear mastic sealant to minimize air leakage, full fixing details to manufacturers specifications

EXTERNAL DOORS

External doors are to be timber with any glass double glazed with an argon filled gap of 16mm with low E glass achieving a U-Value of 1.4W/m2K. Doors to be fully insulated and to achieve a U-value of 1.4W/m2K or less in areas of door where not glazed

LINTELS

Proprietary insulated lintels provided over all openings, see structural drawings for types. End bearings for lintels to be no less than 150mm (each end). The overhang of masonry supported by the lintels should not exceed 25mm. Provide cavity trays over Lintels, 140mm min deep and provide a DPC over the cavity tray extending over end of lintel to form drip externally past window. Weep hole vents above all windows and to bottom edge of all cavity trays. Weep holes should be provided at 450mm (max) centres with at least two weep holes per opening.

SAFETY GLAZING

All glazing below 800mm generally and 1500mm in or within 300mm of doors to be toughened or laminated type complying with BS 6206.

SECURITY

Window and door sets should meet the security requirements of British Standard publication PAS24:2012 or similar standards as set out in approved document Q. Where letter plates are provided they should have a maximum aperture size of 260X40 and be located or designed to hinder anyone attempting to remove keys with sticks and inserting their hand. The main door entering the building should have a door viewer unless the door contains clear glass or a window is provided next to the doorset.

SMOKE DETECTORS

Existing fire alarm system to be extended into new extension; break glass system to be designed by specialist in accordance with BS5839. Emergency lighting to be provided to all rooms as shown on floor plans in accordance with BS5266.

COLOUR CONTRASTING FITTINGS

Surface finishes in WC to contrast with fittings and grab bars etc heat emitters located so as not to impede wheelchair maneuvering space. Colour contrast to be provided generally throughout the building i.e door furniture to background, ramps to landings, nosings to steps, handrails to the background, glazing manifestation, door frames to surrounding walls, wall to ceilings, walls to floors, call control buttons to surrounding face plate, face plate to the surface it is mounted, switches to the surface they are mounted. The nosing of the stair is to be apparent and is to visually contrast with the stair tread, the material should be a minimum of 55mm wide on both the tread and the riser.

ELECTRICS

Full electrical layouts to be agreed with client before first fix stage of build. All electrical work must be designed, installed, inspected and tested by a person competent to do so, i.e registered with NICEIC / EIC or E.C.A. Consumer units are to be mounted so that the switches are between 1350mm and 1450mm above the floor level and a minimum of 300mm (measured horizontally) from an inside corner. All switches, electrical sockets, TV sockets and telephone points to have their centreline between 450mm and 1200mm above finished floor level and a minimum of 300mm (measured horizontally) from an inside corner. Prior to completion of all electrical works Building Control must be issued with an appropriate BS 7671 electrical installation certificate for the work carried out. Electricis to existing house to be checked and upgraded as necessary.

INTERNAL LIGHTING

100% of all new light fittings are to be energy efficient. Energy light fittings to be dedicated in that it must be capable of only accepting lamps having a luminous efficiency greater than 45 lumens per circuit watt. The fixing must be permanently fixed to the ceiling or wall. A light fitting may contain one or more lamps.

EXTERNAL LIGHTING

External light fittings shall be operated by PIR sensors, 'Dusk to Dawn' daylight sensors and time switches and shall be downward facing low energy efficiency fittings including security fittings to have a maximum wattage of 150W. Energy light fittings to be dedicated in that it must be capable of only accepting lamps having a luminous efficiency greater than 40 lumens per circuit watt. The fixing must be permanently fixed to the ceiling or wall.

WASTE PLUMBING

All waste fittings to be UPVC with minimum 75mm deep seal traps.
Basin waste to be:
32mm (up to 1.7m max length) 40mm (up to 3m max length)
Sinks, showers and baths to be:
40mm (up to 3m max length) 50mm (up to 4m max length)
Anti-syphonic traps will be installed where waste runs are in excess of above dimensions.
Any combined waste pipes to be at least 50mm diameter Soil and vent pipe to be 100mm fitted with air admittance valves located above highest connection into soil and vent pipe and to be located so are easily accessible. No soil and vent pipes are to be visible from outside the building. Suitable access points to be fitted to waste plumbing. All plumbing to comply with relevant Water Authority Regulations for supply and storage.

COLD WATER

Wholesome water to be supplied to any place where drinking water is drawn off and to any sink where food is prepared. Wholesome water of softened water should also be supplied to washbasins or bidet in or adjacent to a room containing a sanitary convenience and a fixed bath or shower in a bathroom.

HOT WATER

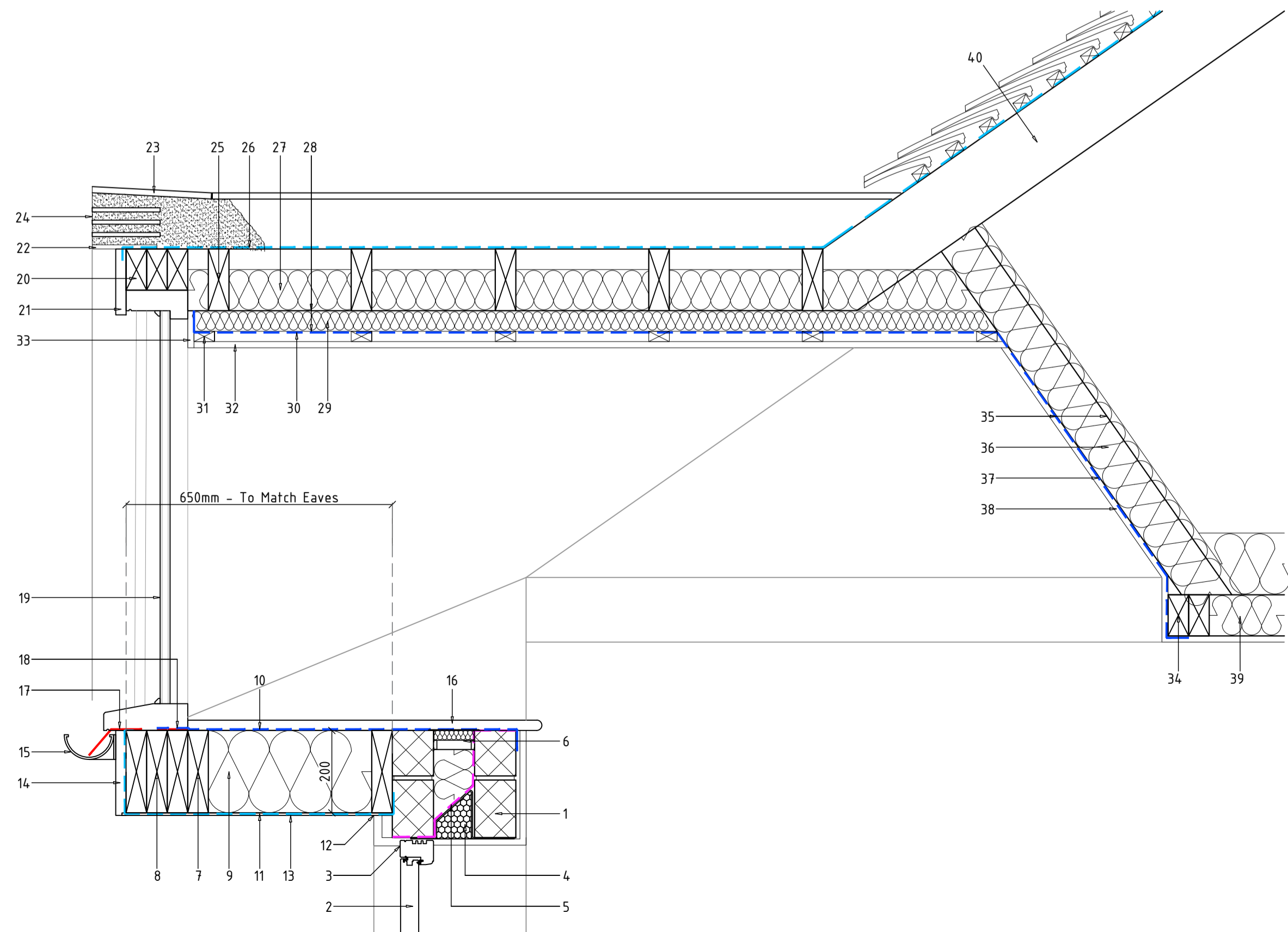
Heated wholesome water or heated softened water should to be supplied to any washbasins or bidet in or adjacent to a room containing a sanitary convenience and a fixed bath and shower and any sink where food is prepared. The hot water temperature to a bath should be limited to a maximum 48°C by the use of an in-line bleeding valve (thermostatic mixing valve TMV) or other appropriate temperature control device, with a maximum temperature stop and suitable arrangement of pipework.

HEATING AND HOT WATER

The new heating and air conditioning system shall be supplied and installed by specialist manufacturer. Daikin 14Kw twin cassette system to include 1no. hard wired controller, 1no. condenser and 4no. electric wall storage heaters (1to male and female toilets, referee's changing room and store room). All associated electrical works, cabling, containment, pipework and condensate drains to be included. Cassette units to be mounted within the ceiling void above the shop area; include to provide permanent service access as required by the installer. Condenser unit (size 990mm H x 940mm W x 320mm D) to be located externally against the south elevation of the new extension (precise location to be agreed with the CA). Final locations of all storage heaters to be agreed on site. All heating pipework (other than that within locked storerooms to which access is to be boxed in. Heating system to be fitted with individual thermostatic valves and controls. All heating pipework to be suitably lagged where running through unheated spaces). Heating system to be designed to achieve the following comfort temperatures: Shop: 20°C; Toilets and changing rooms: 20°C; Store room: 18°C.

DRAINAGE

All pipework and fittings to be UPVC complying with BS 1989 and BS2494:1986. All drainage work to be undertaken strictly in accordance with manufacturers recommendations, (CP 301:1971 (Building Drainage) (CP 2005 1968 (Sewerage) and BS 5955 part 6, 1980 (Installation of plasticised PVC pipe work for gravity drains and sewers). Manholes and inspection chambers shall be as follows by Hepworth Building Products and shall be strictly in accordance with manufacturers recommendations: Manholes shall be 480mm dia. Polypropylene Inspecting Chamber (PPIC) laid and bedded on a pea shingle base complying with BS 5955 part 6:1980 where drain is less than 1000mm deep. Manhole Covers to be circular and in accordance with BS 479 and shall be grade C single seal to areas not accessible to vehicular traffic or Grade B class 2 in any other area. Trench widths should be no less than 300mm plus pipe dia and pea shingle bedding, surround and cover to complete with BS 5955 Part 6: 1980 strictly in accordance with manufacturers recommendations. Pipes through walls should be laid through wall protection sleeve and concrete lintel should be incorporated above drain line. Sleeve to be packed to prevent ingress of vermin. Foul drainage to be connected to existing manhole on site. Surface water to discharge into new soakaway located a min of 5m from any building, size of soakaway to be determined by a percolation test to BRE 365.



Entrance Gable Construction Detail 1:10

1. Refer to separate drawing for external wall construction
2. Timber frame vertically boarded french doors, to achieve min. u-value of 1.4 w/m²K
3. External grade sealant to door head
4. Proprietary insulated cavity lintels over windows, 150mm min bearing each side of opening
5. Proprietary cavity tray over lintels, to extend min. 150mm beyond each end of lintels
6. Proprietary insulated cavity closers to cill
7. Exposed soffit / cill joists fixed to rafter ends, set out adjacent to window and external wall to form form frame for exposed soffit / cill
8. Eaves overhang formed with 3no. timber plates fixed between gable rafter ends
9. Exposed Soffit to be fully insulated in voids between joists with PIR insulation, installed in accordance with manufacturer's instructions, min 0.022w/mK
10. Fix a 1000 gauge vapour control layer to the internal face of exposed soffit insulation, joints lapped and taped in accordance with manufacturer's instructions
11. BBA Approved waterproof breather membrane installed externally to insulation and timber frame in accordance with manufacturers instructions
12. External render finish to abut soffit, finish abutment with external grade sealant
13. 9mm Thick WBP ply soffit fixed to underside of joists ends, painted green to match existing
14. 22mm Thick PAR fascia side fixed to end joist, painted green to match existing
15. 110ø Half round black uPVC gutters to match existing fixed to fascia via black uPVC gutter brackets
16. 25mm Thick SW timber internal cill
17. Install 2000 gauge DPC above plate at window cill, to form drip into gutters
18. Breather membrane and VCL to be suitably lapped at cills with DPC in accordance with manufacturer's details
19. Timber frame gable end glazed screen by specialist manufacturer, glazing to achieve min. u-value of 1.4 w/m²K
20. 3no. Gable rafters to form window head, Refer to structural engineers details for information

21. 22mm PAR bargeboards side fixed to gable rafters, painted green to match existing – to overhang window head by min. 10mm.
22. Fibre cement undercloak to match existing over roofing membrane bedded with mortar, to form min. 25mm overhang over gable wall cladding
23. Last ridge tile tilted up
24. Creasing Tile slips with Flush Mortar pointing to match existing
25. Rafters, see engineers drawings for details – See structural drawings / roof truss manufacturers details for information
26. BBA Approved waterproof breather roofing membrane fixed to top of rafters in accordance with the manufacturers instructions
27. Insulate between rafters with 100mm PIR Insulation, min. 0.022, friction fit – underside of insulation and rafters to align to ensure minimum 50mm ventilation void above insulation and below roofing membrane
28. Fix 50x50 SW counter battens at max 600mm centres to underside of rafters
29. Insulate under rafters, between counter battens with 50mm PIR, min. 0.022, friction fit
30. Fix a 1000 gauge vapour control layer to the underside of the insulation, joints lapped and taped in accordance with manufacturer's instructions
31. Fix 25x38 SW in-line service battens through VCL to form service void
32. Finish sloping ceilings with 12.5mm plasterboard fixed to the underside of the service battens and finish with a smooth plaster skim
33. Plaster finish to return over end service batten to abut with gable glazed screen frame
34. Ceiling Joist trimmers – See structural drawings / roof truss manufacturers details for information
35. Upstand from flat ceiling to be constructed with 47X100C16 vertical studs at 400ctrs fixed to ceiling joist / rafter trimmers
36. Insulate between upstand studs with 120mm fill PIR insulation between, min. 0.022, friction fit
37. Fix a 1000 gauge vapour control layer to the internal face of upstand insulation, joints lapped and taped in accordance with manufacturer's instructions
38. Finish upstands with 12.5mm plasterboard fixed through VCL to studs and finished with a smooth plaster skim
39. Refer to separate detail for flat ceiling insulation details – ensure upstands, sloping ceiling and flat ceiling insulation are suitably lapped
40. Refer to separate detail for main roof construction

Notes :-

1. All Edward Parsley Associates drawings to be read in conjunction with all relevant calculation sheets.
2. Figured dimensions to be taken in preference to scaled dimensions. No scaled dimensions are to be used for setting out or ordering of materials
3. Contractor is responsible for checking all dimensions and site setting out. Any discrepancies to be reported to Edward Parsley Associates before work commences and or materials are ordered.
4. Any works carried out before Building Regulations approval is obtained are carried out at your own risk. Client / contractor is to ensure all necessary statutory approvals (planning permission / planning conditions) are in place before commencing work on site.
5. Drawings to be read in conjunction with approved planning drawings and no work is to commence on site until all planning conditions are approved.
6. Client is responsible for ensuring all steps are taken to comply with the Party Wall Etc Act 1996 when working near / on boundary lines and separating walls.
7. If in doubt please ask.

PRELIMINARY
SUBJECT TO BUILDING
REGULATIONS APPROVAL

B	Revised Heating Spec.	CD	25.122
A	Removed underfloor heating spec.	CD	19.122
rev	Description	by	date

Address
**Gosfield Pavilion, Gosfield Road,
Gosfield, Essex, C09 1TL**

Description
**Proposed pavilion extension –
Construction Details & Notes**

Edward Parsley Associates
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Date	OCT 2021	Drawn By	CD	Status
Scale / Paper	150, 15 & A10 @ A1			REGS
Project	11665	Drawing No	R-04	Revision
				B