

roof = slate
walls = render
windows upvc
doors = upvc

side elevation - west

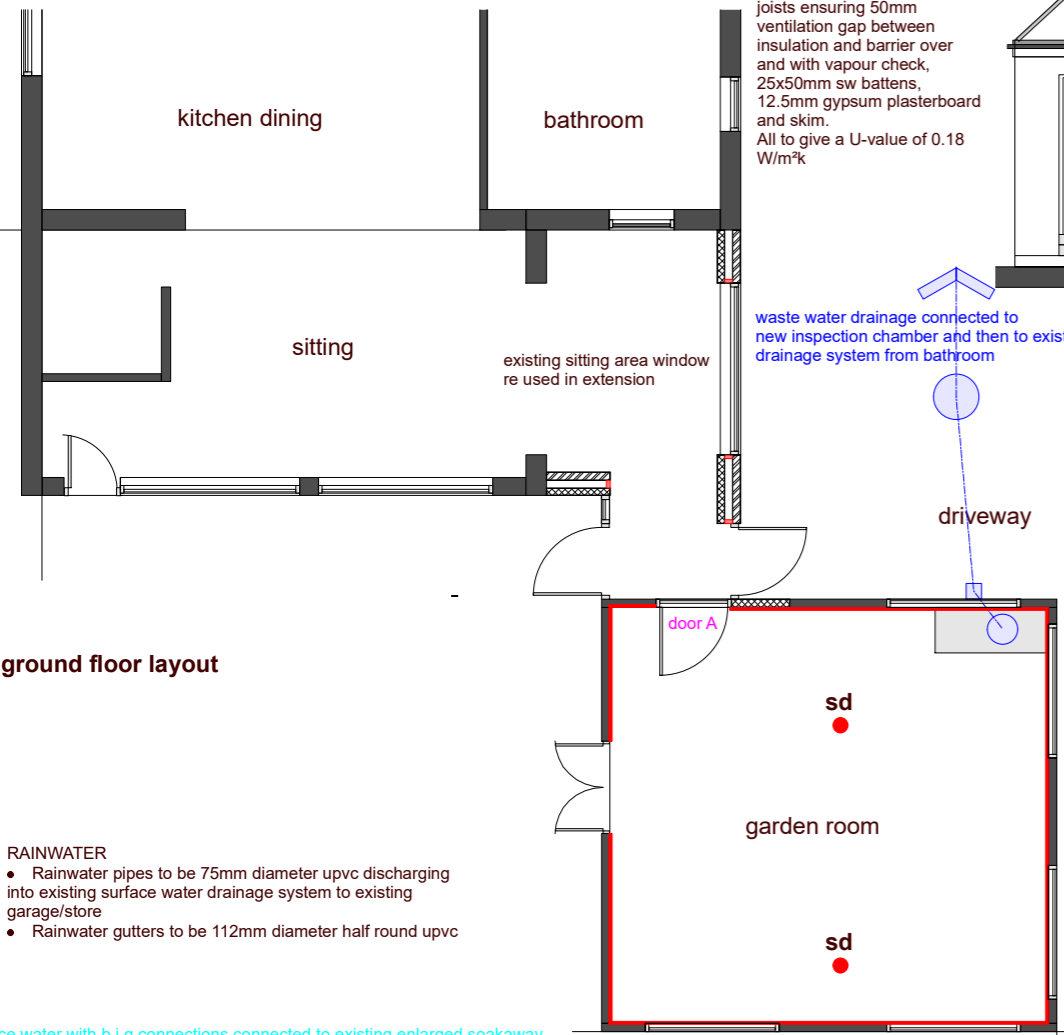
Installation Guidelines for Celotex GA4000 Celotex insulation boards for insulation of existing garage walls

- Existing walls should be assessed to ensure they are of sound condition and are suitable to take the internal linings.
- Existing vinyl wallpaper and gloss paint should be removed leaving the wall surface clean and free from dust and loose materials.
- Ensure that the existing wall is dry with any remedial work undertaken to remove dampness before installation of insulation boards.
- Use the Celotex Insulation Saw to cut the 1200mm x 2400mm Celotex GA4000 boards to fit the floor-to-ceiling height of the room.
- For optimum thermal performance, the unprinted foil surface should face the batten cavity.
- Fix horizontal battens over the insulation at the top and bottom of the wall to hold the boards in place.
- Seal all board joints to create a vapour control layer (VCL) using the Celotex Insulation Tape.
- Add further vertical battens over the insulation at appropriate spacing to provide adequate fixings for the selected lining system. Ensure that a batten coincides with each lining board joint.
- Apply an appropriate sealant around the perimeter of the insulation to provide a vapour seal.
- Additional battens are required around all the openings to provide fixings for linings and grounds for skirtings etc. Battens should be minimum 50mm x 25mm treated softwood.
- The batten depth must be increased to take account of the conduit, if cabling is to be located within the cavity created by the battens.
- Use independent horizontal battens for heavy wall mounted components. Longer fixings may be necessary to fit heavy items to the masonry, independently of the battens.
- Line window and door reveals with thinner Celotex TB4000 boards to reduce the risk of thermal bridging. Fix a batten around the edge of the opening and scribe the board to fit the reveal. Cut the dry lining to suit and mechanically fix into the masonry reveal using proprietary fixings. Finish using an angle fillet at the frame and an angle bead or scrim tape at external corners.
- Drylining to be Gyproc 9.5mm square edged plasterboard fixed to walls with plaster dabs with perimeter seals and continuous dab. Joints and angles to be taped and reinforced all installed to the manufacturers recommendations and to be finished with 3mm thistle multi-finish plaster for direct decoration.

self contained smoke detector alarms to be provided to each room and with heat detector to the kitchen area. Any other detectors at a distance no greater than 7.5m from any habitable room, to be interconnected and mains operated fixed to ceiling at least 300mm from light fittings, all in accordance with Building Regulations Part B Section 1 for heat and smoke detectors.

sd hd
door A to be half hour fire resistant doorset with heat and smoke seals

flat roof extension roof construction to comprise grp roof on 25 thick OSB deck over 200 x 50 SC4 joists at 400 centres with 100mm Celotex GA4000 between rafters and 40 thick below joists ensuring 50mm ventilation gap between insulation and barrier over and with vapour check, 25x50mm sw battens, 12.5mm gypsum plasterboard and skim. All to give a U-value of 0.18 W/m²K



RAINWATER

- Rainwater pipes to be 75mm diameter upvc discharging into existing surface water drainage system to existing garage/store
- Rainwater gutters to be 112mm diameter half round upvc

surface water with b.i.g connections connected to existing enlarged soakaway with 2no. water butts before b.i.gs for watering the garden



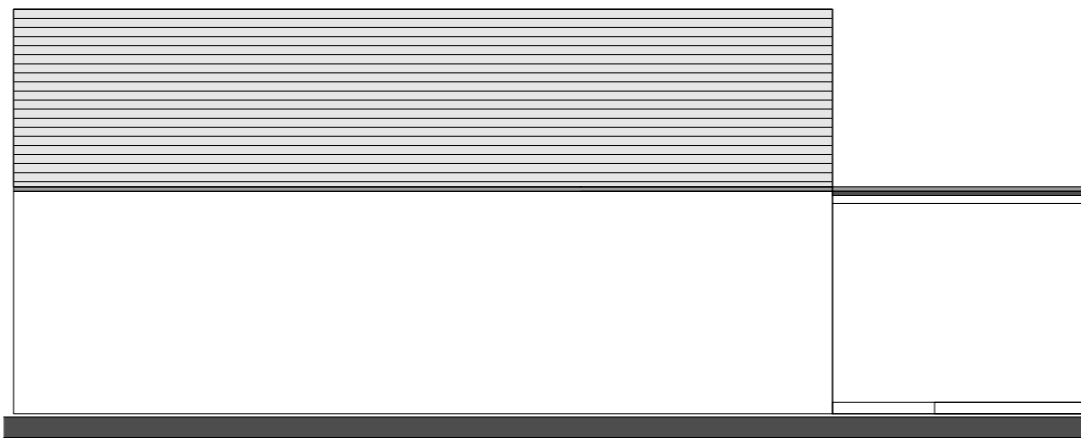
HEATING

- Existing heating system to be extended / adapted.
- All new radiators to be fitted with thermostatic valves.

front elevation - south

ROOF CONSTRUCTION TO ANNEXE (existing removed)
Roof construction to comprise existing reused concrete flat tiles with treated tile battens on a vapour permeable barrier (eg. Marley Ultima PR) or similar. 25 clear cavity with 150mm Celotex XR4000 between rafters and 40mm Celotex XR4000 below rafters - 1000 gauge polythene vapour check with 12.5mm gypsum plasterboard and skim to follow roof slope. Roof to be double boarded when roof slope is below manufacturers recommendations
All to give a U-value of 0.17 W/m²K
Built upon C24 195x44 rafters at 400 centres section to allow for insulation construction with new ridge and eaves beams and interior ceiling to follow slope of new rafters

All tiles including eaves, ridge and verges to be nailed/clipped
roof members to be secured using proprietary anchors, clips and fixings all in accordance with specialist recommendations
Note: no notches or holes to be cut in roof rafters other than at supports where they may be birdsmouthed to a depth not exceeding 1/3 rafter depth



side elevation - east

roof = flat tile
walls = render
windows upvc
doors = upvc

EXTERNAL MASONRY WALL - existing garage
external skin of 100 thick concrete blockwork with render finish to match existing finishes and walls built up by 450mm to give a higher eaves level inside - all subject to the foundations being approved by a structural engineer or the building inspector prior to any construction work
Catnic lintel to cavity wall construction over openings

EXTERNAL MASONRY WALL - new porch
external skin of 100 thick concrete blockwork with render finish to match existing finishes - 100 cavity fill superwall 36 insulation - 100mm concrete blocks (7.0N/sqmm) - plasterboard drylining on dabs with skim plaster finish
Catnic lintel to cavity wall construction over openings with integral cavity trays
Drylining to be Gyproc 9.5mm square edged plasterboard fixed to walls with plaster dabs with perimeter seals and continuous dab. Joints and angles to be taped and reinforced all installed to the manufacturers recommendations and to be finished with 3mm thistle multi-finish plaster for direct decoration.

MORTAR
Mortar for brick/blockwork to be 1:6 cement/sand (Class 3 premix) above DPC and generally 1:3 cement/sand (Class 2 premix) below DPC.
WALL TIES
Wall ties to be stainless steel double triangle type wall ties manufactured to BS 1243.
Wall ties to be built into cavity walls at 450mm centres vertically and 900mm centres horizontally (unless cavity width is over 75mm then horizontal spacing to be 750mm centres). Wall ties are to be capable of using integral insulation clips.
CAVITY CLOSERS
To be proprietary type having a current BBA Certificate, comprising PVC-U extrusions with mortar fins and T-flange keys for direct plaster application, filled with CFC and HCFC free insulation foam; to include all necessary wall fixing ties, flange clips and reveal clips; 'Thermabate' by RMC Panel Products Limited, or equivalent and agreed

SOLID GROUND FLOOR CONSTRUCTION

- Ground floor construction comprising 65mm sand cement screed on 500 gauge visqueen vapour barrier and dressed into brickwork on 120 thick Celotex GA4000 to give a 'U' value minimum 0.17W/m².sq.K - exposed floor on 1200 gauge dpm on 100 thick concrete slab, 25 sand blinding and 150 thick hardcore
- dpm to be fully lapped and sealed with existing/new dpm's and dpc's to internal leaf/internal walls to form continuous barrier (all joints lapped minimum 100mm and bonded together with dpc manufacturers recommended jointing tape).
- Ensure level of new floor matches that of existing floor level.
- radon protection measures - Ground floor construction to include Monarflex 'Reflex Super' gas membrane or similar dressed up wallside and across cavity to form continuous barrier, with cavity tray dpc over
- Venting layer formed using Monarflex 'Monarflow 27' laid in a continuous layer over the interior of the extension ensuring adjacent runs are tightly butted together and joined to extractor fittings, on 150mm crushed stone hardcore well consolidated
- Ventilation path to be provided from the venting layer to atmosphere by pipes at regular 1m intervals running through the substructure walling either to a trench with granular fill or to a vertical riser pipe all as agreed with the Local Authority Building Inspector
- Note: continuity of gas barriers to be maintained around any structural and service penetrations and at corners and junctions using proprietary membranes and sealants as recommended by the relevant manufacturer to ensure a gas tight seal

Foundations 200 thick and 750 wide and may be at a depth greater than indicated dependant on ground conditions and bearing pressure encountered at excavation. Foundation size and depth etc to be all as agreed with the Local Authority Building Inspector

All windows to be high performance weather rated upvc fitted with sealed double glazed units and opening lights as indicated on plans. Windows fitted with sealed double glazed units to give 1.2W/m²K (note: habitable rooms opening light size to achieve minimum 1/20 of floor area for rapid ventilation part of which should be 1.75m above floor level)
All windows to have trickle vents fitted giving background ventilation of not less than 8000mm sq to habitable rooms and 4000mm sq to all other areas

rear elevation - north

Glazing to doors which is wholly or partially within 1500mm from the floor level to be safety glazing to a minimum Class C and marked accordingly to BS 6206 and resist a horizontal force of 0.36kN/m
Glazing adjacent to doors which is wholly or partially within 300mm of the edge of a door & which is also wholly or partially within 1500mm from the floor level to be safety glazing to a minimum Class C and marked accordingly to BS 6206
Low level glazing other than glazing in doors and glazing adjacent to doors which is wholly or partially within 800mm from the floor level to be safety glazing to a minimum Class C and marked accordingly to BS 6206
Note: escape windows to be provided to suit unobstructed openable area that is at least 0.33m² and at least 450mm high and 450mm wide (the route thro' may be at an angle rather than straight thro') the bottom of the openable area should be not more than 1100mm above the floor

infill/porch roof to be grp finish built upon C24 195x44 rafters at 400 centres section with 150mm Celotex XR4000 between rafters and 40mm Celotex XR4000 below rafters - 1000 gauge polythene vapour check with 12.5mm gypsum plasterboard and skim.

PLUMBING

- Waste layout shown is schematic
- 100mm dia waste to Wc's and 38mm dia wastes to all other fittings in uPVC to be fitted with 75mm deep seal traps (note: resealing traps to be fitted to any waste length exceeding 3m)
- Waste pipes to be provided with rodding eyes to each length
- 110mm dia uPVC soil/vent pipe provided to WC (note: sealed roddable access points to be provided at base) and to extend 900 above opening lights
- All waste connections into stack to be above that of the WC or a minimum of 200mm below
- Where SVP's run internally pipe to be wrapped full height in insulation quilt and encased using plywood or 12.5mm plasterboard on 38x38mm sw framing (note: removable panels to be provided where necessary to facilitate rodding)

ELECTRICAL

- The whole of the electrical system is to be extended / adapted in accordance with the latest I.E.E regulations. Details of the design are to be supplied by the Electrical Engineer
- Electrical installation to be designed, installed, inspected and tested in accordance with Chapter 13 of BS7671:2001, and sufficient information will be provided so that persons wishing to operate, maintain or alter the electrical installation can do so with reasonable safety.
- All electrical installations to be undertaken under the auspice of an electrical self-certification scheme authorized by the secretary of state were the person or organization carrying out the electrical work is a competent person under such a scheme.
- All relevant controls to be positioned within the 450mm - 1200mm zone as described in Approved Document M of the building regulations.
- All light fixtures to be fitted with low energy bulbs.

all structural elements to give 30 minute fire resistance



proposed extension at ratten row seamer - scale 1:100 @A3

NMA - proposed

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