

SPECIFICATION SHEET - 2

52.DRAINED CAVITY WATER PROOFING SYSTEM

Type C drained protection in accordance with BS 8102: 1990 - RIW Cavity Drain System as BBA certificate for use in new constructions. Ensure that all materials and products are compatible. Assess structure for suitability of tanking system. The surface must be examined for defects and repaired in accordance with manufacturer's details if required. All retaining elements are to be detailed by a Structural Engineer. All materials and products to be installed by a competent contractor strictly in accordance with the manufacturer's recommendations, BS 8102 and BBA certificate.

Prepare wall by cleaning with a stiff brush. Provide a high density polythene (HDPE) cavity drain membrane, e.g. RIW Cavity Drain, fixed using RIW brick plugs to wall and floor slab staggered at 1m centres. Fixings to be sealed using RIW Sealing Rope. The horizontal and vertical sheets should be butt jointed at the base of the wall and the joint covered with a pre-formed RIW Wall/Floor Junction piece and sealed with proprietary sealing tape. The floor membrane is to be covered by reinforced concrete or screed at least 65mm thick. Provide a suitable drainage channel, e.g. RIW Aqua Channel within the slab around the perimeter of the floor and install a sump and mechanical pump as manufacturer's details with suitable access if required. Drainage channel to be provided with an adequate fall to a suitable soakaway. Ensure suitable access points and rodding eyes at every 10m and every change of direction. Penetrations through waterproofing to be kept to a minimum and filled with RIW flexible sealant or sealing rope detailed by RIW specialist waterproofing manufacturer where unavoidable. In very high water table area an additional moisture barrier may be required. Construct an independent timber frame with preservative treated timber studwork using 100mm x 50mm treated timbers with head and sole plates and noggins at 400mm ctrs ensuring an adequate clear cavity between wall and new stud for cavity drain membrane.

Insulation requirements
Insulation between and over studs to be 90mm Celotex FR4000 between and 37.5mm Celotex PL4000 insulated plaster board with VCL over studs.

53.FIXED EXTERNAL LIGHTING

External light fittings to be fitted as calculated in the DER and in compliance with the Domestic Building Services Compliance Guide. Light fitting to be either:
a. lamp capacity not greater than 100 lamp-watts per light fitting and provided with automatic movement detecting devices (PIR) and automatic daylight sensors ensuring lights shut off automatically when not required.
Or
b. lamp efficacy greater than 75 lumens per circuit-watt; fitted with manual controls and automatic day light cut-off sensors so that lights switch off when daylight is sufficient.

54.PLUMBING SPECIFICATION

All new drainage and sanitary pipework, including layout, materials, bedding/surround etc. must be discussed and approved on site by a Building Control Surveyor prior to installation. Perform air and running tests on completion of work.

Provide and install hot and cold water supplies for connection to fittings and appliances, positioning to be agreed with Client.
Fit new and existing appliances. Positioning to be agreed with Client.

Fit sink, washing machine and dishwasher with 38 diameter PVC waste pipes, with 75mm deep back inlet gully to suit ground finish.

Provide and lay 100 mm diameter underground quality PVC pipe, to form under floor ventilation duct between existing and new air bricks.

55.STRUCTURAL STEEL WORK:

All material and workmanship to be in accordance with BS 449 or BS 5950.

Structural steelwork sections to be Grade 43A mild steel in accordance with BS 4360.

Contractor must verify all dimensions on site before commencing any work or making any shop drawings. No dimensions to be scaled from drawings, any discrepancies must be reported to the Structural Engineers prior to proceeding.

Steel work contractor to design all connection details for maximum moments and reactions as indicated on Structural Engineers drawings and calculations.

Steel work which is not required to be encased in concrete to be blast cleaned / wire brushed free from mill scale, rust and other contamination and painted with two coats of approved primer as soon as practicable but not more than four hours after cleaning.

Uncased stanchions and beams located within an external wall to have a minimum gap of 40 mm from face of external brickwork, or alternatively 25 mm minimum impermeable insulation from face of steel to the external wall, unless galvanised or similiary treatment.

All concrete encased steel work to be unpainted.
All pockets formed in brick work or block work for steel beams to be made good in grade 35 concrete.
Concrete padstones to be provided for steel beam, for sizes see Structural Engineer's calculations.
All existing lintels are to be checked for suitability, where taking additional loads, if inadequate new lintels to be installed.

All existing steel columns and beams to be painted with two layers of fire resistant paint and encased with 2no. layers of 12.5mm plasterboard with staggered and taped joints, and apply 5mm gypsum plaster set to give half hour fire resistance.

56. TIMBER:

new timber to be grade c16 or c24 or engineering timber to bs en1995 as directed on the drawings.
new timber to be vacuum impregnated with preservative to bs 5268. cut ends to be treated with brush applied preservative.
notches in joists not to exceed 25mm in depth.
timber fixings to be simpson strong tie or similar approved as directed on the drawings.

57. UPGRADE OF SOLID EXTERNAL WALL (BRICK WALL)
to achieve min u-value 0.30w/m²k existing wall to be exposed and checked for its suitability. insulate existing wall on the inside using 100mm celotex GA4000 insulation board fixed in to 100 x 50mm battens at 600mm centres.and fix a vapour control layer on the warm side of the insulation. finish with 12.5 plasterboard and a plaster skim. all work in accordance with bs 8212: 1995 (code of practice for dry lining).

PITCHED ROOF INSULATION AT CEILING LEVEL
Pitch 22-45° (Imposed load max 0.75 kN/m² - dead load max 0.75 kN/m²)
To achieve U value of 0.15 W/m²K
Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1:2004 Eurocode 5: Design of timber structures. Roofing tiles to match existing on 25 x 38mm tanalised sw treated battens on breathable felt supported on 47 x 150mm grade C24 rafters at max 400mm centres, max span 3.47m. Rrafters supported on 100 x 50mm sw wall plates.
Insulation at ceiling level to be 150mm XR4000 Celotex between ceiling joists with a further 40mm TB4000 over joists. 18mm chipboard to be provided over insulation.
Construct ceiling using sw joists at 400mm centres, finished internally with 12.5mm plasterboard and min 3mm thistle multi-finish plaster. Provide polythene vapour barrier between insulation and plasterboard.
Where required provide opening at eaves level at least equal to continuous strip 25mm wide on two opposite sides to promote cross-ventilation and provide mono pitched roofs with ridge/high level ventilation equivalent to a 5mm gap via proprietary tile vents spaced in accordance with manufacturer's details.
Restraint strapping - 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanised straps or other approved to BSEN 845-1 at 2m centres.
Loft hatches should be suitable designed and installed to ensure optimum air tightness.

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 1/3 height or 450mm. Provide min 10kg/m³ density acoustic soundproof quilt tightly packed (eg. 100mm Rockwool or Isowool mineral fibre sound insulation) in all voids the full depth of the stud. Partitions built off doubled up joists where partitions run parallel or provide noggins where at right angles, or built off DPC on thickened concrete slab if solid ground floor. Walls faced throughout with 12.5mm plaster board with skim plaster finish. Taped and jointed complete with beads and stops.

VENTILATION
PURGE VENTILATION
Minimum total area of opening in accordance with Table 1.4 Approved Document F1.
Hinged or pivot windows with an opening angle of 15 to 30 degrees to have an openable area in excess 1/10 of the floor area of the room.
External doors and sash, hinged or pivot windows with an opening angle of equal to or greater than 30 degrees to have an openable area in excess of 1/20 of the floor area of the room.
Purge ventilation should be capable of extracting at least 4 air changes per hour per room directly to the outside.
Internal doors should be provided with a 10mm gap below the door to aid air circulation.

BACKGROUND VENTILATION
Controllable background ventilation at least 1700mm above floor level to be provided to habitable rooms and kitchens at a rate of min 8,000mm², and to bathrooms at a rate of min 4000mm², Total number of ventilators installed in a dwellings habitable rooms to be at least 4 ventilators for one bedroom dwellings and 5 ventilators for dwellings with more than one bedroom.
Background ventilators to be tested to BS EN 13141-1.
Background ventilator equivalent area and operation to be measured and recorded.
Noise attenuating background ventilators should be fitted to facades with sustained loud noise.

Where the extension connects to in an existing room and as a result the existing room is left with no windows or background ventilation less than 5000mm², then the new room background ventilation to be at least 10,000mm² equivalent area.
Where the extension connects to in an existing room and as a result the existing room is left with background ventilation at least 5000mm², then both the following is to be provided:
- Background ventilators of at least 12,000mm² equivalent area should be provided between the two rooms.
- Background ventilators of at least 12,000mm² equivalent area between the additional room and the outside.

EXTRACT FOR SHOWER ROOM

Provide mechanical extract ventilation to shower room ducted to external air capable of extracting at a rate of not less than 15 litres per second. Vent to be connected to light switch and to have 15 minute over run if no window in the 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.

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 minute 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.

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. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent 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.

PITCHED ROOF VENTILATION

Maintain a 50mm air gap above insulation in the roof pitch to ventilate roof. Provide opening at eaves level at least equal to continuous strip 25mm wide and opening at ridge equal to continuous strip 5mm wide to promote ventilatio

Notes:
Building Regulation Approval: The owners of the property are advised that an approval of the calculations and drawings by the Local Authority Building Control should be obtained prior to any ordering of material or fabrication. No liability is accepted for any changes that may be required as a result of work having commenced prior to such an approval having been obtained. -This drawing remains the copyright of Express plans and is not to be copied, altered or changed without permission.
This drawing to be read in conjunction with architects and project specifications. Any discrepancy between this drawing and all other project drawings should be brought to the attention of Express plans for clarification prior to commencing the works
Local Authority's building inspector is to be informed by the contractor in writing at least 48 hours prior to the works starting on site and their agreement obtained that work can commence. Structural
Steelwork: All steel members grade to be BS EN 10025 S275 JO (Hollow sections to be S355). Length of the beams and the columns should be provided by the contractor allowing minimum bearing. DO NOT SCALE THE DRAWING.
Steel Corrosion Protection; Preparation: Shot blast to SA2.5. Shop primer, Zinc phosphate (dft 75 micron)
Fire Protection to steel Beams & columns: Box around all steels with 50 x 50 s.w. framework and 2 layers of 12.5mm Fire line plasterboard with staggered joints and 3.5mm skim finish.
Pied stones: Pied stones to be grade C30 concrete.
Beam bearing on pied stones to be minimum 100mm unless otherwise noted specified on Structural Timber:
All timber grade C24 unless otherwise stated. Joists may be notched over bearing, maximum depth of notch 1/3 joist depth. Use steel beam with solid timber packing/plates bolted through web of beams
M12@500 centres behind joists hangers and for and strap fixing. Temporary Works: The contractor is to accept full responsibility for the stability and safety of the works during the total construction period. No undermining of existing structure is to be carried out prior to consultation of structural engineer

Issue	Notes	Drawn	Date
Express Plans			
Suite 12, 29 Belmont Road, Uxbrdge, UB8 1QS Tel: 07375 455206 Email: info@expressplans.co.uk			
Client Mr.D. Ullah 28 Allen Road Haywards Heath RH16 3PT			
Drawing Title SPECIFICATIONS			
Scale NTS	Date 16/04/25	Checked AZ	Drawn By AZ
Drawing Number D12			Revision