

SPECIFICATION SHEET - 1

SPECIFICATIONS

All work to be carried out in accordance with building regulations and british codes of practice. dimensions to be checked on site before work commences and builder to report any discrepancies before work commences. this includes an assessment of whether there will be any significant problem in carrying out the work on site as per the drawing. the builder is assumed to have a working knowledge of the building regulations and work on site must follow the latest building regulations as and when the local authority surveyor requires. any lintels over window and door openings may have to be exposed on site in order to confirm suitability to support the additional loads. inadequate lintels will require renewal as necessary. the building owner is responsible for serving any party wall notices on neighbours prior to building works commencing.

1.CONTRACTOR

Drawings to be read in conjunction with all relevant contract documents, structural engineer's details and specification. the contractor shall be responsible for all levels and dimensions. He is to take requisite levels and dimensions from site and verify those shown on drawing. Any discrepency is to be brought to the attention of ARCHITECT immediately. The contractor is to comply with all statutory obligations and regulations relating to CDM, and Health and Safety.

Builder to confirm whether any existing drain located beneath or within 3m of proposed extension is a public sewer to comply with Approved Document Part H4 obtain confirmation from Thames Water Utilities / Environment Agency to allow the discharging of rainwater into a surface water drain. Air permeability and pressure Testing Reports in accordance with The ATTMA publication 'Measuring Air permeability of Building Envelopes' (ATTMA 2006. are to be provided by builder.

Ventilation systems should be installed & commissioned in accordance with theguidance given in the 2010 edition of the Domestic Ventilation Compliance Guide. Sufficient information about ventilation system should be given to the building owner upon completion of the building work, so that the ventilation system can be operated to provide adequate air flow.

The proposed Heating & Hot water system's are to meet the requirement of 'The Domestic Heating Compliance Guide'. Energy efficient light fittings will be provided and specified in accordance with Approved Document L1.

CO2 Emission rate Calculations and EPC's for the dwelling to show that the dwellings emission rate (DER) is no greater than the Target Emissions rate (TER) using SAP 2005 Full details of water efficiency (G2) and prevention of excessive temperatures (G5) are to be provided in accordance with approved Document G.

2.SOLID FLOOR INSULATION UNDER SLAB

To meet min U value required of 0.18 W/m²K P/A ratio 0.5 - Solid ground floor to consist of 150mm consolidated well-rammed hardcore, blinded with 50mm sand blinding. Provide a 1200 gauge polythene DPM, DPM to be lapped in with DPC in walls. Floor to be insulated over DPM with 90mm thick Celotex GA4000 insulation. 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 by 150mm and sealed. provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over VCL. Finish with 65mm sand/cement finishing screed with light mesh reinforcement. Where drain runs pass under new floor, provide A142 mesh 1.0m wide within bottom of slab 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 to terminate at new 65mm x 215mm air bricks built into new cavity wall with 100mm concrete cover laid under the extension. Ducts to be sleeved through cavity with cavity tray over.

3.STRIP FOUNDATION

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 2004 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.

4.CONCRETE

all materials and workmanship to be in accordance with bs 8110 part 1&2- the structural use of concrete.

concrete quality to be 35n / mm² at 28 days unless noted otherwise. max nominal aggregate to be 20mm. above ground: minimum cement content 300kg / m³. maximum free water cement ratio 0.6. below ground: minimum cement content 330kg / m³. maximum free water cement ratio 0.5. cement: minimum cement content 330kg / m³. maximum free water cement ratio 0.5

5.STRUCTURE

BEAMS

Supply and install new structural elements such as new beams, roof structure, floor structure, bearings, and padstones in accordance with the structural engineer's calculations and details. new steel beams to be encased in 12.5mm 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.

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 manufactures standard tables. stop ends, dpc trays and weep holes to be provided above all externally located lintels.

OPENINGS AND RETURNS

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

6.RESTRAINED TO STRUCTURE

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 bsen 845-1 built into walls at max 2000mm centres and to be taken across minimum 3 rafters and screw fixed. provide solid noggins 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 galvanized metal straps or other approved to bsen 845-1 at maximum 2m centres.

STRAPPING OF FLOORS

Provide lateral restraint where joists run parallel to walls, floors are to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps or other approved in compliance with bs en 845-1 at max 2.0m centres, straps to be taken across minimum of 3 joists. straps to be built into walls. provide 38mm wide x ¾ depth solid noggins between joists at strap positions.

7.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.

8.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).

9.TILING SPECIFICATION

Provide and fix wall tiles with waterproof adhesive and grout. Type of tile to be agreed with Client

10.INSULATION SPECIFICATION

All new windows are to be fitted with ' Pilkington' 'K' glass. U value 1.6 W / m² K New Roof: Insulation layed between and below rafters, use 100mm thick Kingspan 'Kooltherm K7' roof board between rafters and 62.5mm 'Kooltherm K16' insulated plasterboard below to achieve U value 0.18 W / m² K.

18.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 jambs 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.

24.SMOKE DETECTION

Mains operated linked smoke alarm detection system to BS EN 14604 and BS5839:1:2017 to at least a Grade D category LD3 standard and to be mains powered with battery back up. Smoke alarms should be sited so that there is a smoke alarm in the circulation space on all levels(storeys and within 7.5m of the door to every habitable room. If ceiling mounted they should be 300mm from the walls and light fittings. Where the kitchen area is not separated from the stairway or circulation space by a door, there should be an interlinked heat detector in the kitchen.

25.INTERNAL WALLS

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.

26.WINDOWS AND DOOR Unprotected areas

Please note the extent of unprotected area on an external wall, i.e. windows, doors, timber cladding etc, should not exceed: - 5.6m² when the minimum distance between the side of the building and the relevant boundary is 1m - 12m² when the minimum distance between the side of the building and the relevant boundary is 2m - 18m² when the minimum distance between the side of the building and the relevant boundary is 3m - 24m² when the minimum distance between the side of the building and the relevant boundary is 4m - 30m² when the minimum distance between the side of the building and the relevant boundary is 5m

no limit when the minimum distance between the side of the building and the relevant boundary is 6m (The above applies only to buildings which are 1m or more from any point of a relevant boundary) Other methods of calculation are given in Approved Document B1.

27.WASTES

bath waste to be 43mm diameter pvc basin waste to be 37mm diameter pvc w.c. waste to be 100mm diameter pvc shower waste to be 50mm diameter pvc traps to be 75mm diameter deep seal. access and rodding points to all changes in direction. gutter to dormer roof to be 100mm half round pvc, and rainwater downpipe discharging onto rear sloping roof or running down to the rainwater gully is 63mm diameter pvc.

air admittance valve to the stub stack in bathroom to loft in order to provide for a vented system. connect to existing soil and vent pipe. soil pipe to be extended up to 900mm above window opening where found to be within 3m of the window.

28.MEANS OF ESCAPE AND FIRE RESISTANCE

Fire doors Form a protected escape stairway by providing half hour fire resistance to all partitions as well as floors and ceilings above and below rooms. Stairway to be protected at all levels and leading directly to external door at ground level (no inner rooms allowed). All doors on to the stairway must be FD30 rated fire doors to BS 476-22:1987 (fitted with intumescent strips rebated around sides & top of door or frame if required by BCD). Where applicable, any glazing in fire doors to be half hour fire resisting and glazing in the walls forming the escape route enclosure to have 30 minutes fire resistance and be at least 1.1m above the floor level or stair pitch line

29.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 dwelling is constructed to minimise unwanted air leakage through the new building fabric. Size of wastes pipes and max length of branch connections (if max length is exceeded then anti vacuum traps to be used) Wash basin - 1.7m for 32mm pipe 3m for 40mm pipe Bath/shower - 3m for 40mm pipe 4m for 50mm pipe W/c - 6m for 100mm pipe for single WC All branch pipes to connect to 110mm soil and vent pipe terminating min 900mm above any openings within 3m. Or to 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. Waste pipes not to connect within 200mm of the WC connection. Supply hot and cold water to all fittings as appropriate.

33.ELECTRICAL WORKS

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, niscic 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 the council.

ELECTRICAL SPECIFICATION

All new electrical work is to be designed, installed, inspected and tested in accordance with bs 7671 (i.e.e. wiring regulations 17th edition). the works are to be undertaken by an installer registered under a suitable electrical self-certification scheme, or alternatively by a suitably qualified person, with a certificate of compliance produced by that person to building control on completion of the works. provide and install electrical power and lighting circuits and their fittings. type and positioning to be agreed with client. light switches and power socket outlets are to be positioned between 450mm and 1200 mm above finished floor level. 75% energy efficient lighting to be provided fixed external lighting should have effective control and/or use efficient lamps; having lamp capacity not greater than 100 lamp-watts per light fitting alternatively lights should have lamps with a luminous efficacy greater than 75 lumens per circuit-watt. the lighting automatically switches off when there is enough daylight and they should be controllable manually as well.

INTERNAL LIGHTING

Install low energy light fittings that only take lamps having a luminous efficiency greater than 75 lumens per circuit watt and a total output greater than 400 lamp lumens. Not less than three energy efficient light fittings per four of all the light fittings in the main dwelling spaces to comply with Part L of the current Building Regulations and the Domestic Building Services Compliance Guide.

36.ROOF LIGHTS

Min U-value of 1.4 W/m²K. Roof-lights to be double glazed with 16mm argon gap and soft low-E glass. Window Energy Rating to be Band C or better. Roof lights to be fitted in accordance with manufacturer's instructions with rafters doubled up to sides and suitable flashings etc.

37.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.

38.NEW AND REPLACEMENT WINDOWS

New and replacement windows to be double glazed with 16mm argon gap and soft coat 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.

39.NEW AND REPLACEMENT DOORS

New and replacement doors to achieve a U-Value of 1.40W/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.

40.VENTILATION

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 8000mm²; and to kitchens, bathrooms, WCs and utility rooms at a rate of 2500mm². Purge ventilation - New Windows/rooflights 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.

EXTRACT TO W/C

W/C to have mechanical ventilation ducted to external air with an extract rating of 15l/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. 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 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. 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.

45.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 (900mm 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 1401-1: 2009.

46.INSPECTION CHAMBERS

Underground quality proprietary UPVC 450mm diameter inspection chambers to be provided at all changes of level, direction, connections and every 45m in straight runs. Inspection chambers to have bolt down double sealed covers in buildings and be adequate for vehicle loads in driveways.

47.ABOVE GROUND DRAINAGE

All new above ground drainage and plumbing to comply with BS EN 12056-2:2000 for sanitary pipework. All drainage to be in accordance with Part H of the Building Regulations. Wastes to have 75mm deep anti vac bottle traps and rodding eyes to be provided at changes of direction.

Size of wastes pipes and max length of branch connections (if max length is exceeded then anti vacuum traps to be used) Wash basin - 1.7m for 32mm pipe 4m for 40mm pipe Bath/shower - 3m for 40mm pipe 4m for 50mm pipe W/c - 6m for 100mm pipe for single WC All branch pipes to connect to 110mm soil and vent pipe terminating min 900mm above any openings within 3m. Or to 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. Waste pipes not to connect on to SVP within 200mm of the WC connection. Supply hot and cold water to all fittings as appropriate.

48.SOIL AND VENT PIPE

Svp to be extended up in 110mm dia UPVC and to terminate min 900mm above any openings within 3m. Provide a long radius bend at foot of SVP.

49.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.

50.PIPEWORK THROUGH WALLS

Where new pipework passes through external walls form rocker joints either side wall face of max length 600mm with flexible joints with short length of pipe bedded in wall. Alternatively provide 75mm deep pre-cast concrete plank lintels over drain to form opening in wall to give 50mm space all round pipe; mask opening both sides with rigid sheat material and compressible sealant to prevent entry of fill or vermin.

51.TANKED PROTECTION.

Vandex Super Type A waterproofing in accordance with BS 8102: 1990 to give a protection level of grade 2 (suitable for concrete surfaces and storage areas only as detailed in BBA certificate). Ensure that all materials and products are compatible. Assess structure for suitability of tanking system and ensure substructure is free draining. The concrete 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. Concrete surfaces to be prepared for waterproofing system by being bush hammered, scabbled or sandblasted and then wetted down. Apply two coats of Vandex Super Crystalline Waterproofing, to the wall and floor slab surface with a trowel or suitable spray equipment. Provide a coved fillet with a suitable mortar at wall and floor junction Ensure continuity between wall and floor waterproofing and around the structure. Penetrations through waterproofing to be kept to a minimum and detailed by specialist waterproofing manufacture where unavoidable. Vandex Premix to be used as a final coat in areas where enhanced resistance to mechanical abrasion is required. Provide 77.5mm Celotex PL4000 insulated plasterboard dry-lining and floor finish as required strictly in accordance with manufacturer's recommendations.

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. Pad stones: Pad stones to be grade C30 concrete. Beam bearing on pad 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			
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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 D11			Revision