

Site Preparation

Ground to be prepared for new works by removing any existing remaining or deralict, all unsuitable material, vegetable matter, tree or shrub roots and removing these to a depth which will prevent re-growth. Seal and cap off any existing redundant services as necessary, if any. Take reasonable precautions to avoid any danger to health which might be caused by contaminants and ground gases eg landfill gases, radon, vapours which might be in or on the ground.

Foundations

Traditional strip foundations. Please see structural engineer's details. All foundations to be a minimum of 1200mm below ground level, exact depth to be agreed on site with the Building Control Officer to suit site conditions and Structural Engineer's requirements. Insulated blocks to inner skin to be taken down to foundation level 300mm below floor insulation. Cavity insulation (water resistant) to be taken down below DPC. Ensure foundations are taken below invert level of any adjacent drains. All to be constructed in accordance with BS 8004: 1986 Code of Practice for foundations. Sulphate resistant cement to be used if required. Building Control must inspect the foundation trenches before concrete is poured. (See engineers details and drawings.

Underground Foul Drainage

Underground drainage to consist of 100mm diameter UPVC proprietary pipe work to give a 1:40 fall minimum. Surround pipes in 400mm pea shingle (900mm under drives). Shall pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide rodding access at all changes of direction and junctions. All below drainage to comply with BS7158 and BS801. Soil and vent pipe to open to air with vent pipe cap.

Pipework through walls

Where new pipework passes through external walls form rocker joints either side of wall face with maximum pipe length of 600mm with flexible joints with short length of pipe bedded in wall.

Alternatively provide 75mm deep pre-cast plank lintels over drain to form opening in wall to give 50mm space all round pipe. Mask opening both sides with rigid sheet material and compressible sealant to prevent entry of vermin.

Ground floor construction

65mm sand cement screed, on 500g vapour control barrier below over 150mm PIR floor insulation slabs, on 150mm 1:2:4 mix concrete slab, incorporating A142 mesh over any internal drain runs which may appear to be within 150mm from crown of pipe to underside of concrete. Mesh to be 1000mm in width with minimum 50mm cover. Provide 30mm insulated upstand to all internal perimeters. Concrete slab to be on 1200g Polythene DPM linked to DPC's in external walls, on 50mm sand blinding, on 150mm hardcore base of well compacted approved rubble of type 2 DOT material. Hardcore base to be inspected to remove any wood or steel debris prior to blinding. Note Polythene DPM to be laid above and below PIR insulation, with no area left uncovered. Floor to achieve a U value of 0.10 W/m2k. (See Forum Design for details)

First floor structure

To be timber 47 x 195mm height C24 at 400mm centres, see mnufactures details. Joist to be built off Simpson restraint type joist hangers from wall, herringbone strutting to be incorporated at mid point of span. Where joists run parallel external walls provide and fix 30 x 5mm galvanised ms straps at 1800mm centers over a minimum 3 joists on noggin supports. Floor covering to be 22mm T4G floor chipboard type 3m with 22mm WBP plywood in bathrooms and wet areas. (See ENR structural design for details)

Walls

New cavity walls in two leaves. 100mm outer leaf of brck work with 100mm cavity, with an aerated block 0.15W/mk (3.5Kn). Insulation to be 90mm thickness PIR (0.022), the remaining 10mm cavity, low emissive. Cavity closed at plate level. Cavity trays to be incorporated and installed to manufacture guidance. Insulated jamb filler/vertical DPC at all window and door openings. Provide a movement joint every 6m, 3m from corners, with vertical DPC. External walls to meet the minimum U value of 0.17Wm2k. Internal finish to be plastered with 3mm skim finish (13mm). Where external wall is to be clad with timber weather boarding wall is to have an external leaf of concrete block work (Thermal conductivity 0.15) with weather boarding fixed via 25 x 50mm battens.

NOTE! PSI junction details are to be provided by Forum Energy Consultants with the use of BARCD details.

Wall Ties

All walls constructed with stainless steel vertical twist type retaining wall ties built in at 450mm centres vertically maximum, 900mm horizontally and 225 centres at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS 1243.

DPC

Provide horizontal strip polymer (hyload) damp proof course to both leafs minimum 150mm above external ground level. DPC to be made continuous with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed.

Above Ground Drainage

All basins sinks, washing machine and dishwasher appliances to be connected to 40mm diameter plastic waste drainage with solvent welded joints. All appliances and sanitaryware/sink apparatus to be fitted with 75mm deep seal traps. All connections to WC's and soil pipes to be in 110mm diameter AG drainage. If AAV's are indicated these are to be installed above the flood plan of the adjacent appliance. Ensure that all accessible rodding point access is available at all changes in direction. Any boxing in of pipework is to have removable covers at the required rodding access points. All above and below ground drainage is to be pressure tested on completion in the presence of the LA BCO.

Fire protection to steel beams

Fire protection to steel beams to be 1 hour via the use of a intumescent paint, Contego Passive Fire Barrier, or similar. To be applied in accordance with the manufactures details. Certification of the fire paint covering the structural steel sections is required to be handed to building control prior to completion.

Rainwater drainage

New rainwater goods to be 110 half round gutters taken to 68mm downpipes. Rainwater to be taken to a soakaway situated a minimum of 5m away from any building via 110mm diameter pipes surrounded in 150mm granular fill. Soakaway construction to be with concrete perforated rings. Soakaway to be a minimum of 1 cubic metre capacity (or to a depth the Local Building Control Officer requires) with geotextile surround to prevent migration of fines. In low porosity soils a porosity test may be required to establish size and depth of soakaway.

Potable water and water efficiency calculation

Potable water is to be provided at all appliances, a 48degree limiter is to be provided at all showers and baths. Hot water storage system is to be designed and installed in accordance with BS6700:2006, fitted and maintained in accordance with BS EN 12897:2006.

Means of escape

Emergency exit windows are to be 450x450mm minimum, with an unobstructed openable area of at least 0.33m2, 1100mm above floor level maximum. Any first floor windows, proposed or altered at first floor level needs to comply with means of escape B1. Locks to external door and flat entrance doors are to be fitted with non key operated locks such as Thumb squib latch. Windows on the second floor will not be an acceptable route for escape.

Pitched roof

Roof to be truss roof designed by specialists on a 75x100mm wall plate, with 30 x 5mm galvanized restraint straps screwed to the inner wall face at 1200mm centres. Provide and fit untearable roofing membrane over rafters laid horizontally with 150mm laps. Insulation to be 100mm Kooltherm K107 laid between rafters, with 52.5mm k118 layer of insulation to under side of rafters to meet U value of 0.15 W/m2k. External finish to be clay tile built off 40 x 50mm soft wood treated battens. Ensure the 50mm air gap is maintained over the insulation between rafters. Eaves to have a 25mm wide continuous air gap with a 5mm continuous gap at the ridge to BS 5250, BS5534. Ridge and hips to have a dry fix ridge tile with 5mm air gap. Internal finish to be 3mm plaster skim over 2 layers of 15mm sound block with staggered joints. Design and calculations to be provided to building control by buidler prior to construction. Insulation to flat ceiling joists to be 200mm laid between joists with 250mm over to achieve. For timber sizes see ENR structural design)

Thermal brdging to wind post.

Proposed steel wind post to be rapped in Spacetherm cold bridging insulation tape or similar to prevent cold bridging. Installed in accordance with the manufactures guidance

Windows and doors

Any glassing in critnal areas, such as rear bi-folding doors, back door and internal doors between the family room and the lounge are to be of toughened or laminated glass in accordance with BS EN 12600. Window and door design is to be compliant with PAS 24 or equivalent security standard and installed in accordance with the manufactures detail. U value to be 1.20 W/m2k. Glass to be laminated a minimum thickness of 6.4mm, with a 12mm air gap. See MRL acoustic's report.

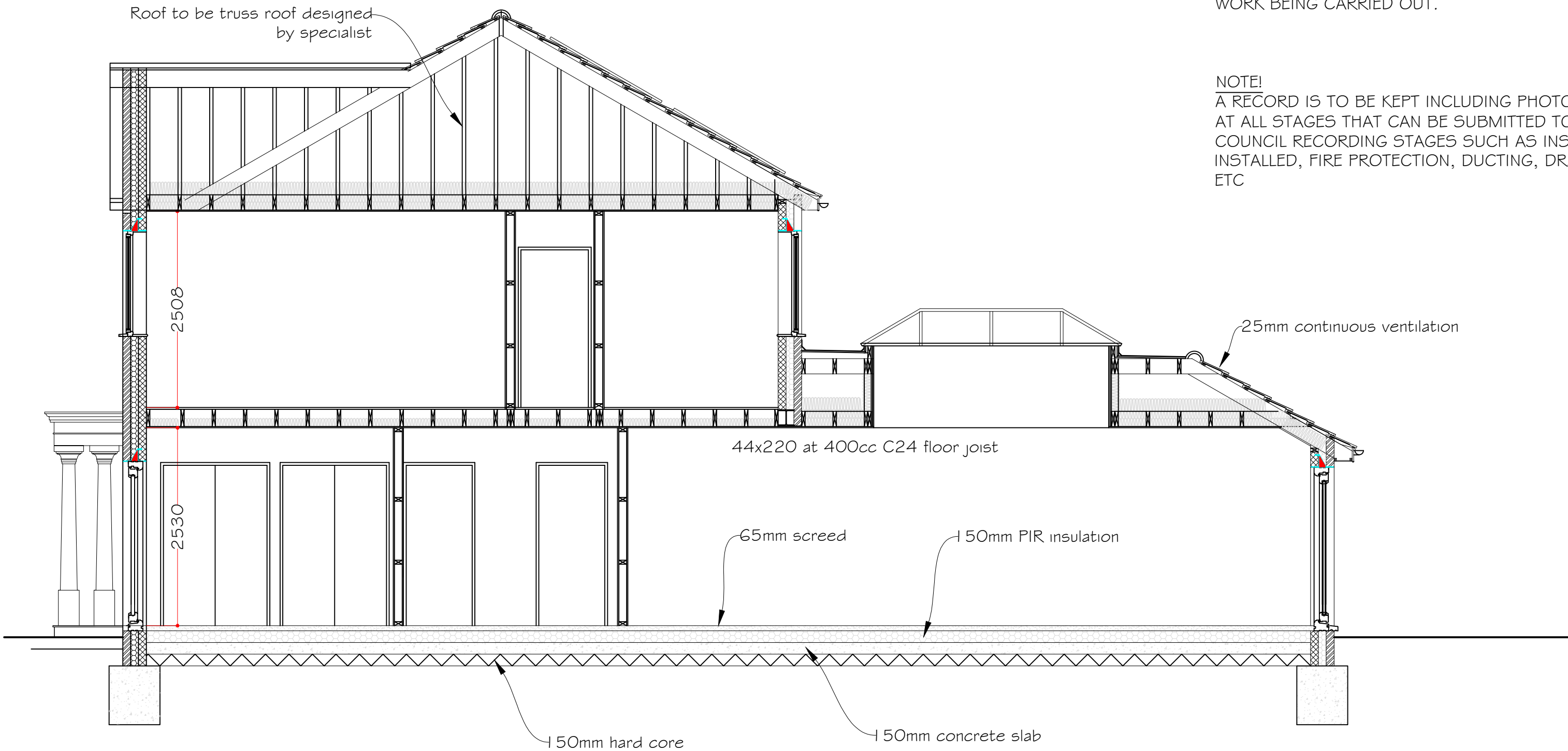
PAS 24

All windows and doors any part of which is within 2m vertically of an accessible level surface, or a window within 2m vertically of a flat or slopping that is within 3.5m of ground level to comply with PAS24 and to comply with approved document part Q.

Smoke detection

Mains operated linked automatic smoke detection system to BS 5446-1:2000 and BS 5839-6:2009 category. LD3. Standard and to be mains powered with battery back up. If ceiling mounted, they should be 300mm from the walls and light fittings. An electrical certificate is to be supplied to the LABC BS7671 upon completion of the works.

DETECTOR HEAT DETECTOR SMOKE



## Section A-A

Scale 1:50

Heating.

Hot water via ASHP unit to indirect cylinder 210 ltr capacity with proprietary spray foam insulation. Cylinder fitted with a thermostat with primary pipe work to be insulated, heat to have separate timer.

SAP calculation

Prior to the start of any works on site a SAP calculation must have been supplied to Building control and approved. The SAP rating must be followed at all times, any alternative must be approved prior to any works starting.

Consideration of high-efficiency alternative systems

Prior to any construction being started on site a feasibility study on using high-efficiency alternative system alternative is to be carried out. The documentation is to be available to the local authority to verify. All lighting to be low E lighting, fittings to be LED circa 4watts and 75% efficacy. See Forum Energy Consultants.

Internal stud walls

To be built off a 100x50mm sole and head plate, with 100x50mm vertical studs built at 400mm centers, 600mm horizontal noggins between studs, with joists double under when built parallel to joists. 100mm mineral wool insulation quilt between studs with 12.5mm plaster board and skim finish. Walls to wet rooms to have moisture resistant plaster boards

Ventilation and air test

In accordance with the Domestic Ventilation Guide, mechanical ventilation systems are to be tested, along with an low leak air test, with the results provided to Building control no later than 5 days after the test has been carried out. See MRL acoustic report.

Air permeability and pressure testing

An air pressure test is to be carried out on the building in accordance with regulation 26 and paragraph L1(a)(i) of schedule 1. The results must be given to building control with in 7 days of the test being carried out. Alternatively if a value of 5m3(h.m2) for the air permeability is adopted in the calculation of the DER testing will not be required.

Internal Lighting

Install low energy light fittings that only take lamps having luminous efficiency greater than 75 lumens per light fitting With power around 4 Watts. 100% low E light fittings in the main dwelling spaces by way of ceiling fitted LED to comply with Part L of the current Building Regulations. SAP calculation to be read in conjunction with any proposed lighting. See Forum Design Consultants.

Electcnal

All electrical work is required to meet the requirements of Part P and must be designed, installed, inspected and tested by a competent person registered under the competent person self-certification scheme such as BRE Certification Ltd, BSI, NICEIC Certification Services or Zunch Ltd. An appropriate BC7671 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 Building Control Officer. Electrical consumer units are to be positioned between 1350-1500mm above floor level.

NOTE! STRUCTURAL WORKS

ALL STRUCTURAL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE INFORMATION PROVIDED BY THE STRUCTURAL ENGINEER AND ANY CHANGES OR QUERIES APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO THE WORK BEING CARRIED OUT.

NOTE!

A RECORD IS TO BE KEPT INCLUDING PHOTOGRAPHIC AT ALL STAGES THAT CAN BE SUBMITTED TO THE COUNCIL RECORDING STAGES SUCH AS INSULATION INSTALLED, FIRE PROTECTION, DUCTING, DRAINAGE ETC

Stairs

To be constructed in timber with 1/2 hour fire protection,220 maximum rise, with 220minimum going, with a maximum pitch of 42°. Landing depth to be no less than stair width, with a 2000mm minimum headroom above pitch line, hand rails to be 900mm above pitch line. Balusters to have a gap no greater than 100mm and to be non climbable. Winders to have a minimum 50mm tread, with centre line of tread no more than the maximum tread. Hand rails to be provided on at least one side of stairs and continuous around stairwell on landing. Nosing with 16-25mm overlap, all to comply with K1 and to building control approval.

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| Client                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Mr & Mrs Gili              |          |
| Address                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Willow Pitt Hermitage Road |          |
| Drawing title                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Section A-A                |          |
| Scale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1:50                       |          |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | July 2025                  | Drawn by |
| Drawing No                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 24/453/04                  |          |