

**Side extension to form garage, family room and two bedrooms
at 17 Park Road, Purbrook, Widley, Waterlooville.**

For Mr Mrs Abraham rev 01

May 2012

These notes are for Building Regulation purposes and do not constitute a specification of work to be done. They are to be read in conjunction with drawings ABR010 and ABR020 and calculations. All dimensions must be checked on site by contractor before and during construction on site. Where the proposed work falls within the scope of the Party Wall etc. Act 1996, it is the responsibility of the owner to give the appropriate notice to adjoining owner(s).

General: Existing garage to be demolished. Line of existing foul water drainage to be accurately established from existing manhole at rear of existing garage-see plans

Pitched roof: Interlocking double concrete tiles to match existing profile and colour on minimum 25mm thick battens and "Tyvek Supro" or equivalent breather membrane laid in accordance with Agrément Certificate and manufacturers requirements on 50 X 150mm C24 rafters at 400mm centres (over skilling area). 50x100 at 400 c/c to lower and upper roof void areas. Ridge to be propped at 400 c/c off 50x100 plated down to 50x100 plate fixed to beam 3 as shown on section a-a. Ensure insulation is dressed down at eaves to meet wall insulation. Existing roof to have barn hip formed to match barn hip on extension roof.

Pitched roofs (general): Insulate roof void areas with a total thickness of 270mm "Rockwool Roll" mineral fibre insulation with 100mm laid between joists and 170mm laid across and above joists. Ensure insulation is dressed down at eaves to meet wall insulation. Code 4 lead flashing where roof meets tile hung walls. Leadwork carried out in accordance with Lead Development Association guidelines. All **Rafters must be birdsmouthed over all supporting plates/beams.** Where rafters and ceiling joists run parallel with external walls, provide galvanised 5x30ms straps, 1.2m long let into underside of timbers with noggins in between and hooked down cavity face of inner skin. Provide 5x30 ms 1m long vertical straps @ 2m c/c to all plates.

Skilling: For rafter size -see above: Provide double rafters under all dormer cheeks. Insulate "skilling" ceilings with 75mm thick Celotex GA4075 insulation board between rafters, ensuring 20mm air void over and line underside of rafters with 50mm thick Celotex GA4050 insulation board, tape all joints. Perimeter to be mastic sealed together with any penetrations, 12.5mm foil backed plasterboard ceiling, plaster finish.

Dormer/ cheeks: Tile hanging to match existing on treated battens/counter battens, untearable roofing felt to BS747 type 1F on 12mm WBP plywood nailed as above, 50x100 studs and plates. Studs @ 400mm c/c, cross braced. Provide Celotex GA4070 between studs and Celotex TB4012 to the inside face of studs. 12.5mm plaster board internal lining. taped joints perimeter and any penetrations, and 12.5mm Knauf wallboard taped joints before plaster finish. 2x50x100 timber beam over windows and double studs each side-maintain 50mm airflow gap over lintel. Provide lead soakers and flashing at roof/dormer junction. Provide triple rafters under cheeks.

Dormer flat roof: Flat Roof: 12.5mm bitumen bedded stone chippings on 3 Layer high performance roofing felt to BS747 and CP144 on WBP plywood decking on furring pieces to give 1:60 fall. 50x150 C24 joists @ 400mm centres with 100mm Celotex GA 4100 insulation in between. Tape all joints with Celotex insulation tape and seal perimeter edges with



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mastic. Ensure min 50mm airgap over insulation. Internally line with 45mm Celotex PL4000 thermal laminate ceiling with bonded 12.5mm plasterboard. Plaster/Artex finish. 25mm continuous soffit vents on all sides. Provide layboard and tilting fillet at flat/ pitched roof junction and extend felt up under tiles and over ridge by 300mm.

External masonry walls: Note: Existing brickwork to house to be rendered externally to match extension as suitable matching bricks are not available. Outer skin of lightweight blockwork finished with two coat render (with brickwork up to dpc level), 90mm cavity filled with "Rockwool" insulation batts built in as work proceeds, 100mm "Thermalite Shield 2000" block (or equivalent block by other manufacturer) inner skin, plastered. Ensure all wall insulation is extended up past eaves to link with roof insulation. Stainless steel wall ties at 750mm horizontally and 450mm vertically staggered and every block course alongside openings. All new work toothed and bonded to existing. Cavities and dpc's to be continuous. External dpc minimum 150mm above ground level. Close cavities at reveals with insulated vertical dpc's ('Ruberclose' or similar). Wall insulation to be taken up to underside of window board. IG L/1 100 Open Back" steel lintels (or similar approved steel lintels) over openings insulated with polystyrene with minimum 150mm bearing to each end. Provide cavity trays with weep holes and end turnups.

Stud Internal Walls / Partitions: 50 X 100mm C16 timber studwork at 400mm centres, cross braced, lined both sides with 12.5mm plasterboard and 3mm plaster set coat. Provide double studs at openings and at beam support positions. Provide 25mm "Rockwool" mineral fibre slabs, minimum density 10kg/m³ suspended between studs.

Masonry internal wall between garage and family room : 190mm Thermalite shield blockwork in on family room side with 60mm Gyproc Thermaline Super board on dabs to give a U-value of 0.27. wall to rendered on garage side.

Ground Floor: P/A 0.77- 50mm screed, 100mm concrete, 1200 gauge polythene dpm continuous with dpc on 60mm Celotex GA4060 or 105mm "Jablite Jabfloor premium polystyrene floor insulation board with vertical insulation to external sides on minimum 100mm sand blinded, compacted hardcore. Hardcore compacted in layers – maximum depth of hardcore not to exceed 600mm – if 600mm is exceeded reduce by infilling with lean-mix concrete. Maintain ventilation to existing timber floor with 100mm diameter UPVC pipes laid in hardcore taken to air bricks in new walls.

Garage floor: 100mm concrete, 1200 gauge polythene dpm continuous with dpc on minimum 100mm sand blinded, compacted hardcore. Hardcore compacted in layers.

Ground floors general: If subsoil dictates that foundations need to be engineered designed, ground floors will also need to be designed by engineer to accommodate desiccated or shrinkable subsoil.

Foundations: The site of the extension contains semi mature fir trees on boundary. Foundation depth and design will depend on subsoil type. Trial hole on line of extension foundation to be dug to establish volume change potential of subsoil, If high shrinkage soil, engineered designed foundations will be required. If medium or low shrinkage subsoil-use

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strip foundations- External-600mm wide x 300mm deep concrete strip foundation at min depth 1.2m deep but deepened to 150mm below invert level of any drain within 1m of foundation. Depth to be increased in accordance with NHBC table 4.2 in respect of trees- depth to depend on plasticity of subsoil. Heave precautions to be installed in accordance with NHBC table 4.2. Internal foundation-450mm wide at depth as above. Provide min 150mm clear gap around any drain passing through line of foundation and bridge with p.c concrete lintels. All to the satisfaction of the Local Authority.

Structural: See plan and notes/calculation sheets for structural details of new beams. Steel Beams to be encased in 2x12.5mm plasterboard for 30 minutes fire resistance. Provide padstones/steel bearing plates under all steel beams as detailed in calculations. Floor joists and flat roof joist to be fixed to beams with Simpson Strong Tie joist hangers JHA450 with all holes nailed in accordance with manufacturers recommendations. Provide solid blocking to support joist hanger where it sits below main support.

First Floor: New floor to finish level with existing. 22mm t & g moisture resisting grade chipboard to BS5669 type C4 on joists to match existing if possible but increased to a minimum 50 X 200mm C24 joists at maximum 400mm centres with 12.5mm plasterboard ceiling with joints taped and filled, plaster finish. Minimum 38 X 38mm herringbone or solid strutting at third points of span. Provide 30 X 5mm galvanised steel straps to tie joists to walls at maximum 2m centres with noggin/packing as necessary. Insulate between joists with minimum 100mm "Rockwool" mineral fibre insulation, minimum density 10kg/m³. Ceiling over garage to be 2x12.5mm plasterboard to give 30 minutes fire resistance.

New Doorways/Openings: Form new doorways/openings as shown. Existing bathroom to be converted to en-suite as shown. Door into garage from family room to be a self closing FD30S fire door and frame. Minimum 100mm step down into garage.

Windows & External Doors/Ventilation: 3.0m wide folding external doors to family room by specialist supplier to achieve a maximum U-value of 1.6W/m²K. Windows to be white PVC-U double glazed frames with Low-E glass to give a maximum U-value of 1.6W/m²K i.e. minimum 16mm air gap to sealed units if emissivity = 0.05 – soft coat. Opening vents minimum 1/20th of floor area of enclosed room. Provide trickle vents in window/door frames to give background ventilation of minimum 8000mm² to family room and new bedrooms and minimum 4000mm² to new bathroom and en-suite shower room. Glazing to be in accordance with Part N, Building Regulations 2010 with safety glazing to all critical areas to BS6206: 1981. Obscure glazing to bathrooms and en-suites. Provide mastic seal around all door and window frames. Openable elements of doors and windows to be fitted with draught stripping. Window in new bedrooms to have minimum one no. opening casement with an unobstructed openable area of minimum 0.33m² for means of escape purposes, i.e. minimum size of opening part to be 735mm X 450mm, with bottom of opening part maximum 1100mm above floor level. Garage door to be 3.354x2.286 high by Garador or similar

Mechanical Ventilation: Provide mechanical ventilation ducted to external air to bathroom and en-suite shower room -fan to extract at minimum 15 litres per second.

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Drainage: Locate positions of all existing below ground drains at commencement of work. Layout of proposed drainage as illustrated to be altered as necessary due to conditions on site. Break out existing manhole at rear corner of existing garage and renew / realign drains as shown with new inspection chambers as shown clear of new foundations. 100mm diameter UPVC pipes laid in bed/surround of pea shingle; minimum fall 1 in 80. New manhole to be circular upvc. All to BS8301.

Above Ground Drainage: All to BS 5572. Connect new first floor bathroom and en-suite to existing S&VP. Provide rodding access at change of direction. Hand basin- 40mm branch, bath and shower 40mm branch. All traps to be 75mm deep anti-vac traps. Branch pipes Min1:80 fall where horizontal.

Rainwater Disposal: 112mm gutter connected to existing gutters and downpipes and to new 68mm diameter downpipes as shown to discharge into 100mm diameter UPVC drains laid in bed/surround of pea shingle, minimum fall 1 in 80, taken to existing system if available or to new soakaways minimum 1.5m³ capacity, minimum 5m from all buildings.

Services: Extend/adapt existing heating and electrical and hot and cold water systems to serve new rooms and appliances in accordance with owners' requirements and relevant bylaws/regulations. Insulate pipework in accordance with Part L, Building Regulations. New gas fired, wall hung balanced flue or fan flue condensing boiler in family room in position to be determined with durable wire cage externally if within 2m of ground level. Flue outlet to be in accordance with Diagram 3.4 of Approved Document J. Boiler to have a minimum SEDBUK rating of 86%. Provide new heating and hot water controls in accordance with Approved Document L1B to include timing controls, zoning controls and boiler control interlocks. Fit thermostatic radiator valves to new radiators.

Provide in new rooms/areas affected by the proposed building work energy efficient lighting having a luminous efficacy greater than 40 lumens per circuit-watt – the number of such fittings required to be three fitting per four new fittings provided. All electrical work to meet requirements of Part P (Electrical Safety - dwellings) of the Building Regulations and to be designed, installed, inspected and tested by a person competent to do so. Prior to completion of work the Building Control Surveyor will need to be satisfied that Part P has been complied with. This is likely to require an appropriate BS7671 electrical installation certificate to be issued for the work by a person competent to do so.

Smoke Detectors: Provide mains powered self-contained smoke detectors in ground floor hall and first floor landing area. Detectors to have battery back up and to be interconnected and installed in accordance with BS5839-1: 2002 / BS5839-6: 2004 as appropriate and paragraphs 1.10 to 1.24 of Approved Document B (2006 Edition), Building Regulations 2000.

Fittings, etc: Kitchen units, sanitary fittings, internal doors, internal fittings and electrical layouts, and decorations all to clients' requirements. Layout of kitchen units as shown on plan is for illustrative purposes only.