

**Double garage with multi-use area over.
at 1 Woodbury Avenue, Langstone.**

For Mr Mrs Brooks

rev 00

July 2015

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 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: The existing garage to the west side of the property is to be completely demolished.

New Pitched roof: -Plain tiles to match existing pitch (43 degrees to main roof) and colour to match existing house, 25mm thick battens and "Tyvek Supro" or equivalent breather membrane, min 225 mm laps laid in accordance with Agrément Certificate and manufacturers requirements on 50 X 125mm C24 rafters at 400mm centers. Provide double rafters under dormer cheeks. Insulate all void areas with 100mm fibreglass insulation laid between joist and a further 200mm fibreglass laid across joists. Insulate "skilling" ceilings with 75mm thick "Celotex 3000" insulation board between rafters, ensuring 20mm air void over and line underside of rafters with 55mm thick "Celotex 3000" insulation board, tape all joints. 1200 gauge vapour barrier internal lining with taped joints, sealed perimeter and any penetrations, 9.5mm foil backed plasterboard ceiling, plaster finish. Ensure insulation is dressed down at eaves to meet wall insulation. Total thickness 300mm. Ensure insulation is dressed down at eaves to meet wall insulation. White PVC-U fascias, bargeboards and soffits. Roof to be birdsmouthed over new wall plates. 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.

Flat Roof: 12.5mm bitumen bedded stone chippings on 3 Layer high performance roofing felt to BS747 and CP 144, 120mm Celotex TC3000 mechanically fixed and laid broken bond on 1000 gauge polythene vapour barrier, nailed to deck with all joints taped and 300mm perimeter turn up and over bonded to Celotex top surface. Installation to be in accordance with Celotex installation instructions. 19mm WBP plywood on furring pieces to give 1:60 fall. 50x200 C24 joists @ 400mm centers, 12.5mm plasterboard ceiling with plaster finish. Felt from flat roof taken 300mm up under roof tiles on tilting fillet and layboard. Ensure insulation is infilled between joist and dressed down to meet insulation in dormer walls.

Ground floor external masonry walls: Face brickwork to match existing brickwork in main house, 50 mm cavity filled with 50mm rockwool/Dritherm, 100mm "Thermalite Shield 2000" block (or equivalent block by other manufacturer) inner skin, Stainless steel wall ties at 750mm horizontally and 450mm vertically staggered and every block course alongside openings. External dpc minimum 150mm above ground level. Close cavities at reveals with insulated vertical dpc's ('Ruberclose' or similar). IG or Catnic steel lintels (or similar approved steel lintels) over openings insulated with polystyrene with minimum 150mm bearing to each end. Provide all cavity trays with weep holes and end turnups.



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Gable/Dormer/ cheeks: Tile hanging to match existing on treated battens, untearable roofing felt on 12.5mm WBP plywood, 50x100 studs and plates. Studs @ 400mm c/c, cross braced. 12.5mm plaster board internal lining. To all walls abutting first floor room or stairs, provide 80mm GA4000 Celotex insulation between studs with 50mm PL 4000 Celotex over inner face of studs with taped joints before 12.5mm plaster boarding. 2x50150 timber beam over windows and double studs each side. Provide lead soakers and flashing at roof/dormer junction.

Stud Internal Walls / Partitions: 100 X 50mm C16 timber studwork at 400mm centres, double studs at openings, cross braced, lined with 12.5mm plasterboard and 3mm plaster set coat. Provide 100mm fibreglass insulation in-between studs

Wall between Garage and stairs/utility/wc- 215mm thick Thermalite Shield 2000 block work built off 450mm wide trench filled foundation (see below)

Ground Floor: Garage-Minimum 100mm thick concrete on 1200 gauge on well minimum 150mm sand blinded, compacted hardcore. Allow for minimum 100mm step up from garage floor level into rear stair area.

Ground floor stair/wc area/utility- 50mm screed, 100mm concrete, 70mm Celotex GA4000 with 20mm vertical insulation to external perimeter on 1200 gauge polythene dpm fully lapped to and made continuous with wall dpc on minimum 100mm sand blinded, compacted hardcore. Install 500 gauge polythene Vapour control layer (VCL) over insulation to minimise risk of condensation.

First Floor: 22mm t&g chipboard to BS 5669:part 2 type C4 or C5 with glued joints, water resistant type to wet areas. New joists 50x170mm C24 joists @ 400mm c/c. All floor joists to be provided with Solid or herring bone strutting at 1/3rd and 2/3rd span position. Provide 1m long 5x30mm continuity straps, screwed at 75mm c/c to link floor joists where span broken by Beam B1. Provide 50x50 battens to support all edges of plasterboard. 2x 12.5mm plaster board ceilings and set to give 30 minutes fire resistance between garage and room ove. Provide double joists under studwork partitions. Provide fully supported 5x30 ms straps @ 2m c/c where joists run parallel with walls. Provide 100mm Rockwool in all floor voids.

Stairs: Total rise approximately 2.52mm to be accurately checked on site prior to manufacturing stairs. 13 no riser of 193.8mm, Going 220mm, min 50mm around winder. Max pitch 42 degrees. Minimum headroom generally 2M above pitch line and landing of new and existing stairs. Balustrade handrail at 900mm above pitch line and first floor landing level with vertical balusters at max 100mm centers. Double newel/newel posts at half landing with double joists as stair trimmers.

Contractor must check these dimensions are fully achievable prior to ordering

Foundations: External-600mm wide (450mm wide for internal wall between garage/stair area) x 600mm deep concrete strip foundation at min depth 1.2m deep. Final depth to be in accordance

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with NHBC practice note 4.2 where building in shrinkable soil within the influence of trees-depth to depend on plasticity of subsoil. Heave precautions to be installed in accordance with NHBC table 4.2. Final depth to suit site conditions but must be firm 100KN/M2 base. All to Local authority approval. Bottom of foundation trench must also be deep enough to allow a 45 degree line taken from bottom edge of excavation to fall under the invert level of any adjacent drainage.

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.

Windows & External Doors/Ventilation: All external doors, Sliding doors, rooflights and windows to be 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. Glazing to be in accordance with Part K, Building Regulations 2013 with safety glazing to all critical areas to BS6206: 1981. Provide mastic seal around all door and window frames. Openable elements of doors and windows to be fitted with draught stripping.

Note: One new first floor windows must provide at least one min 450 x750 clear opening to provide means of escape.

Drainage: New drainage to be 100mm diameter UPVC pipes laid in bed/surround of pea shingle; minimum fall 1 in 80. New manhole to be 450mm diameter upvc to collect new drain lines as shown and to connect into existing system as shown. Provide RC lintel over drains where passing through walls, provide 50mm clear gap around drain shielded with non rotable board. All to BS8301.

Mechanical Ventilation: Provide mechanical ventilation ducted to external air to utility to extract at minimum 30 litres per second also ducted to external air. Provide wc with 6 litres per second extractor fans ducted to external air with 15 minute over run, doors to wc's to be undercut by 10mm to allow inlet air.

Rainwater Disposal: 112mm gutter to roof slopes and 68mm dia downpipes to discharge as shown into 100mm diameter UPVC drains laid in bed/surround of pea shingle, minimum fall 1 in 80, taken to 100mm diameter UPVC drains laid in bed/surround of pea shingle, minimum fall 1 in 80, taken to new min 1.5M3 soakaways, positioned 5m away from any buildings.

Services: Extend/adapt existing electrical systems to serve new garage and room over in accordance with owners' requirements and relevant bylaws/regulations. Provide in new room 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. Heating to first floor room to be electrical. 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.

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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 Detection: Install mains powered self-contained smoke detectors in ground floor hall and first room area as shown SD on proposed floor plans. Detectors to have battery back up and to be interconnected and installed in accordance with BS5839-1: Building Regulations 2013.

Fittings, etc: Internal fittings, kitchen layout, electrical layouts, and decorations all to clients' requirements.