

Ground floor extensions to form en-suite and garden room, alterations to form first floor WC
at 8 Bernina Avenue, Waterloo, PO7 6XQ
For Mr Mrs Modi **rev 3** **Aug 2018**

These notes are for Building Regulation and Planning permission 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). Any encroachment over or on boundary only to be with adjoining owners written permission. Adjacent owners permission to be gained to abut garden room onto side of existing garage

General: Existing foul and storm drainage system to be investigated and line and depth to be established. Assumed line only shown. WC at first floor is to be form in existing light well from gable window. Bulkhead under window to be carefully removed to reveal structured under. Allow to provide new floor(see below) spanning from wall between lounge and hallway and external inner skin.

Flood resilience summary:

The existing property is shown as being in flood zone 2 as indicated on the Environment Agency map. The design of the extensions are therefore based on the floor level being set at the same level as the existing house and additional resilient construction being incorporated to mitigate the potential effect of flooding.

The following resilience measures are to be built into the extensions which are to be used as an extension and a gardenroom and will not contain any fixed appliances or fittings.

Walls: cavity walls insulated with closed cell insulation and built using stainless steel wall ties. Internal finish to be sand cement render finished with Lime based plaster. Internal decoration to walls will be emulsion not wall paper. UPVC or Wooden skirting that has been sealed on all faces with oil based paint to be used.

Floor: Solid concrete floor set at same level as existing house incorporating close cell insulation. Floor to incorporate a 1200 gauge visquene dpm linked fully to dpcs.

Doors/windows: External doors/windows to be UPVC

Electrical fittings: New sockets to be located a minimum of 300mm above finished floor level.

Fixtures and fittings: No permanently fixed fixtures or fittings will be placed in extension

New Pitched bonnet roof: Interlocking concrete tiles to match existing pitch and colour, 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 100mm C24 rafters spanning onto 2x50x150 C24 ridge beam. Roof to be birdsmouthed over new wall plates. . 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. 1000 gauge vapour barrier internal lining with taped joints, sealed perimeter and any penetrations, 9.5mm foil backed plasterboard ceiling, plaster finish. White PVC-U facias, bargeboards and soffits.

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Roof general: 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.

New Flat roofs: Note-finished level of new warm deck flat roof to en-suite room must be set to match roofline of existing roofs.

Flat Roof: 12.5mm bitumen bedded stone chippings on 3 Layer high performance roofing felt to BS747 and CP 144. Felt to be taken min 300mm over existing felt finish and re-bonded to provide weather tight finish. 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. All in accordance with Celotex installation instructions. 19mm WBP plywood on furring pieces to give 1:60 fall. 50x150 C24 joists over ensuite and 50x170 C24 over garden room @ 400mm centers, with double trimmers around Velux CFP SOOG 090090 flat roof light with insulated upstands, 12.5mm plasterboard ceiling with plaster finish. Where Joists 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. Spaced at 1m c/c. Provide 5x30 ms 1m long vertical straps @ 1m c/c to all plates.

New Velux into Bed1: Provide Velux SO6 GGU006 in existing pitched roof in front of rear dormer above Bed 1. Provide double rafters and ceiling joists as trimmers and form insulated studwork light shaft down from Velux into ceiling of Bed1. Studwork to be in filled between studs with GA4080 (80mm) Celotex insulation with a further layer of GA4012 over the inner face of the studs. All joints taped as above

External masonry walls: Face brickwork to match existing, 100mm cavity with Celotex CW4045 fixed to innerskin in accordance with manufacturers installation guidelines and built in as work proceeds, 100mm "Thermalite Shield 2000" block (or equivalent block by other manufacturer) inner skin, Internal finish to be sand cement render finished with Lime based plaster. Internal decoration to walls will be emulsion not wall paper. UPVC or Wooden skirting that has been sealed on all faces with oil based paint to be used. 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. Ensure min 150mm cavity below floor 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 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.

Ground Floor: 65mm 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.

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Maintain ventilation to any existing floor voids with 100mm diameter UPVC pipes laid in hardcore taken to new telescopic air bricks in new extension rear wall.

First Floor to WC: 22mm t&g chipboard to BS 5669:part 2 type C4 or C5 with glued joints, water resistant type to wet areas. New joists min 47x150 C24 joists @ 400mm c/c if required but as existing to maintain floor levels. Provide 100mm Rockwool in all floor voids

Foundations: 600mm wide x 600mm deep concrete strip foundation at min depth 1.2m deep. Final depth to be in accordance with NHBC practice note 4.2 where building in shrinkable soil within the influence of trees-depth to depend on plasticity of subsoil. 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. Foundation alongside existing garage foundation to overlap existing to a minimum depth of 300mm.

Internal Stud walls: Walls to be 50x 100 studs and plates @ 400c/c faced each side with 12.5mm Plasterboard or water proof cement fibre board if into wet area. Load bearing studwork to be cross braced. Provide double studs adjacent to all openings and where supporting beams. Provide 100mm fiberglass insulation in-between studs of all internal walls. All joints taped as above

Windows & External Doors/Ventilation: All external doors, French 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.

Window area calculation:

Allowable area		Actual	
0.25% new floor area		Ensuite door	2.1 x 0.85 = 1.785
GF rear	2.7x2.4x0.25 =1.62	WC window	0.6x1.05 =0.63
Ex bedroom window	1.3x2.06 =2.65	Roof light	0.98x0.98=0.96
Bath room window	1.1x1.05=1.15		
Total	= 4.27	Total	=3.375
		Therefore	OK

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. New drainage to be 100mm diameter UPVC pipes laid in bed/surround of pea shingle; minimum fall 1 in 80. Provide RC lintel over drains where passing through walls, provide 50mm clear gap around

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drain shielded with non rotable board. All to BS8301. Provide new 450mm diameter UPVC Inspection chamber.

Mechanical Ventilation: Provide 30 L/S mechanical ventilation ducted to external air to En-suite and new WC with 15 minute over run.

Plumbing: All to BS 5572. 100mm diameter upvc, strapped at 1m center with roding access at bends. All to BS 5572. Hand basin- 40mm branch , shower 40mm branch. All traps to be 75mm deep anti-vac traps. Provide Durgo AAV to terminate new stub stack in new ground floor shower room and first floor WC. Durgo to be boxed in with vent grill in boxing. Durgo to be positioned above handbasin flood level.

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 existing system or new min 2M3 soakaway at rear, positioned 5m away from any buildings, or route to any existing Storm water drainage system located on site. Alternatively, carry out soakage tests of subsoil conditions in accordance with BRE digest 365 and design capacity to suit results. Existing rear RWDP at first floor level to be re-routed as shown.

Services: Extend/adapt existing heating and electrical and hot and cold water systems to serve new room and appliances in accordance with owners' requirements and relevant bylaws/regulations. Fit thermostatic radiator valves to new radiators. Provide in new room/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.

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