

Room in the roof space and rear extension at 3 Jessie Road, Bedhampton, PO9 3TH For Mr. Mrs. Reynolds	
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These notes and calculations are for the purpose of obtaining statutory consents and do not constitute a full specification. All dimensions must be checked on site by contractor before and during construction on site. All sizes stated must be fully confirmed prior to ordering materials

Party Wall etc Act 1996: Works (including building in new beams) on walls/boundaries /foundations that are shared with another property or foundations within 3M of the boundary, fall within the Act. Notice and details of the intended works must be served on the adjoining owner at least two months before the commencement of any works. If agreement cannot be reached, the Party Wall Act requires the appointment of a jointly agreed surveyor to draw up an agreement. Please see the Act for full details.

Rooms in roof

Pitched roof area to front: Provide 50x 125 C24 rafters @400mm c/c alongside existing 100x35mm rafters. Provide Velux SO6 at front as shown with double rafters each side, into new bed 4.

Existing Front pitched roof/skilling area: Maintain 50mm ventilation gap above insulation, insulate new 50x125 rafters with GA 4075 (75mm) Celotex between rafters and a further PL4060 (60mm) fixed across inner face of rafters. All penetrations and joints taped with self adhesive aluminum foil tape and perimeter edges sealed with mastic then 12.5 mm plaster boarding. Provide double rafters adjacent to Velux roof windows. Maintain min 50 mm air gaps above insulation. Provide high level vent tiles to provide a ventilation opening at high level equal to a continuous 5mm gap for the length of the ridge above skilling areas. Existing eaves /soffits to be provided with a continuous 25mm vent strip.

Ventilated Flat Roof: 12.5mm bitumen bedded stone chippings on 3 Layer high performance roofing felt to BS747 and CP144 or use high performance single ply membrane on 19mm ply deck on furring pieces to give 1:60 fall. 50x150 C24 joists @ 400mm centers, provide Celotex GA3100 (100mm) between joists and underline with Celotex TB3045 (45mm), and 12.5mm foil backed plasterboard ceiling with plaster finish. Provide layboard and tilting fillet at flat/ pitched roof junction and extend felt 300mm up under ridge and over pitch roof Tyvec underlay. Soffits to be provided with a continuous 25mm vent strip.



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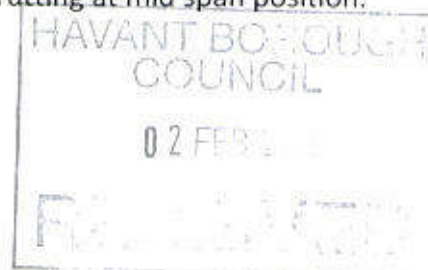
Dormer/ cheeks: Tile hanging to match existing on treated battens, untearable breather membrane on 9mm Supalux boarding (only to cheeks within 1M of boundary) on 12.5mm WBP plywood, 50x100 studs and plates. Studs @ 400mm c/c, cross braced. 12.5mm plaster board internal lining. Provide GA 4080 (80mm) Celotex insulation between studs with PL4015 (15mm) Celotex over inner face of studs with taped joints before plaster boarding. 2x50x150 timber beams over bed 1 windows and en suite window and double studs each side. Cheeks to be built off inner skin of existing gable and triple floor joists as shown. Provide lead soakers and flashing at roof/dormer junction.

Existing Party wall: Ensure all gaps/missing brickwork in existing wall are fully bricked up/stopped. Where in new room, finish internally by fitting 80mm Celotex PL4000 to wall by over battening with 25mm x 50mm battens at 600mm centres. Fixings taken through battens and PL 4000 into the wall using proprietary fixings. All joints in insulation to be taped with Celotex insulation tape and perimeter sealed with mastic. All in accordance with Celotex instructions.

Internal Stud walls: Walls to be 50x 100 studs (50x 75 for wall between ensuite and top landing) and plates @ 400c/c faced each side with 12.5mm Plasterboard. 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. Walls between room and roof space to be 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.

Structural: See plan and notes/calculation sheets for further structural details. All beams and trimmers to be packed off existing ceiling by 10mm. All structural timber to be C24 grade. Joist hanger to be Simpson Strong Tie JHA, lapped over supporting beams / plates with all holes nailed in accordance with manufacturers recommendations. Steel Beams to be encased in 2x12.5mm plasterboard for 30 minutes fire resistance.

New second floor: Complete loft space to be re-floored out to eaves with 22mm t&g chipboard to BS 5669: part 2 type C4 or C5 with glued joints, water resistant type to ensuite. Existing joist to be checked as 50x150mm C24 joists @ 400mm c/c. For stair trimmer sizes -see calculations. Double joists under partitions and bath. Fix ceiling joists to any new floor joists where binders removed. Pack up new joists by 10mm of supporting walls. Ensure there are solid or herring bone strutting at mid span position.



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Joist hanger fixing to beams to be via Simpson Strong Tie JHA hangers with all holes nailed in accordance with manufacturers recommendations. Provide sound insulation between floor joists with minimum 100mm "Rockwool" mineral fibre insulation, minimum density 10kg/m3.

Stairs: Total rise approximately 2630 mm to be accurately checked on site prior to manufacturing stairs. 13 no riser of 202.2mm, Going 225mm. Max pitch 42 degrees. Minimum going around newel post to be 50mm. Double newel posts as shown. Minimum headroom generally 2M above pitch. Balustrade (+ vertical balusters) at 900mm above pitch line and floor level. Maximum gap between balusters 100mm. Width of stairs and landing 750mm. Pack boundary side stringer off wall to suit width.
Contractor must check these dimensions are fully achievable prior to ordering.

Openings: All 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.

Bed 1-1.8m wide x 1.2m deep + Velux SO6 to front

Ensuite – 1.2mx1.05m deep

Plumbing: New SVP to terminate either 900mm above highest opening window with lead slate where passing through roof. Svp to be taken up face of pitched roof and up dormer wall as shown. All to BS 5572. Provide new 100 diameter branch from ensuite WC, min1:60 fall where horizontal, Hand basin- 40mm branch, shower 40mm branch connected to top of new horizontal 100 diameter S&VP. All traps to be 75mm deep anti-vac traps.

Rainwater: 112mm UPVC gutter connected to existing gutter via 63mm diameter down pipes

Chimneys: Existing chimneys stack to be demolished in roof space, down to ceiling level. Chimney to be used for beam bearing.



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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. 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, first floor landing area and second floor landing area. Detectors to have battery back up and to be interconnected and installed in accordance with BS5839-1: Building Regulations 2013.

Fittings, etc: Sanitary fittings, internal doors, internal fittings and electrical layouts, and decorations all to clients' requirements. Layout of en-suite as shown on plan is for illustrative purposes only.

Fire Precautions: All existing doors from habitable rooms (not bathroom) onto ground and first floor hall/landings to be fitted with FD30 fire doors (See on plan). Mains wired interlinked smoke detectors with battery back up to be provided at ground and first and second floor landing levels. (See ⊕ on plan)

Mechanical Ventilation: Provide 15 l/s extractor in en-suite to be connected via 100mm dia horizontal duct through dormer side wall or roof to external air and terminated with hooded meshed outlet.



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Rear Extension

General: Existing single storey monopitch annexe and wc to be carefully demolished and exposed wall of adjacent extension to be assessed for re-weatherproofing and refinishing-existing exposed portion of wall has rendered finish. Allow provisional sum for work to this wall which will need to be agreed with owner of number 5 Jessie Road. This is likely to involve applying 3 coats of bitumen waterproofing and 2 coat rendered finish.

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. All in accordance with Celotex installation instructions. 19mm WBP plywood on firring pieces to give 1:60 fall. New flat roof joists to be 50x 195 C24 timbers @400 c/c with new lantern trimmers T5-T8 as per calculations. 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 @ 1.2m c/c to all plates.

New lantern: to be supplied by specialist with appropriate anti spread tie bars, in double glazed glass 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. Provide trimmers as per calculations and insulated upstand / weathering in accordance with manufacturers recommendations

External masonry walls: 100mm face brickwork to match existing, 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 render/plaster finish. 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. Catnic steel **heavy duty** lintels (or similar approved steel lintels) over openings

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insulated with polystyrene with minimum 150mm bearing to each end. Provide cavity trays with weep holes and end turnups.

Ground Floor: P/A 0.66- 50mm screed, 100mm concrete, 1200 gauge polythene dpm continuous with dpc on 75mm Celotex GA4000 floor insulation board with 20mm vertical insulation to perimeter on minimum 100mm sand blinded, compacted hardcore. Maintain ventilation to existing timber floor with 100mm diameter UPVC pipes laid in hardcore taken to new telescopic air bricks in new extension rear wall.

Foundations: External-600mm wide x minimum 500mm deep concrete strip foundation at min depth 1.2m deep but to minimum increased depth equal to the invert level of any drain within 1M of foundation. Final depth to suit site conditions but must be firm base. Provide rc lintels and 50mm all round clearance where any drains / sewers pass through foundations.

Structural: All Steel Beams to be encased in 2x12.5mm plasterboard for 30 minutes fire resistance. Provide concrete padstones under all steel beams as detailed in calculations. See plan and notes/calculation sheets for structural details of new beams and bearings

Windows & External Doors/Ventilation: Style and pattern to match existing. All external 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 rooms. 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
Ex dining room doors 2.4 x 1.6=3.84	Lounge Bi fold 2.1 x 1.80 = 3.78
0.25% new floor area 4.7x4.2x0.25=4.935	Kitchen window 1.05x1.20 =1.26
Kitchen window 0.6x1.3=0.78	Lantern 3.2x1.6 =5.12
Kitchen door 2.4x0.8= 1.92	
Total = 11.475	Total =10.16
	Therefore OK

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Provide new heating and hot water controls in accordance with Approved Document L1B to include timing controls, zoning controls and boiler control interlocks. Insulate pipework in accordance with Part L, Building 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 45 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 doors, internal fittings and electrical layouts, and decorations all to clients' requirements. Layout of kitchen units and sanitary accommodation as shown on plan is for illustrative purposes only.