

BOTH

Creative

partnership

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89 West Street
Titchfield
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Project Details

Garage conversion into bedroom & wetroom
Mr Sean O'Sullivan
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Chandlers Ford
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Architect's / Draughtsperson's Details

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PLANNING PERMISSION

Agent to determine whether the garage conversion requires planning permission or listed building consent as the garage may be restricted by specific conditions that prevent its use for anything other than the parking of a private car. The owner is strongly advised to check with The Council's Development Control section before starting work. Please note that it is a criminal offence to carry out unauthorised work to a listed building even if the work is completely inside the property.

NOTICE OF COMMENCEMENT

A notice of commencement is to be submitted to Building Control within 5 days of work being regarded as commenced, under regulation 16 of The Building Regulations etc. (Amendment) (England) Regulations 2010.

Work will be deemed to have commenced when the build has progressed to at least one of the following:

For complex buildings – Foundations are constructed, and the structure of the lowest floor level is complete.

For new buildings and horizontal extensions – Sub surface structure of the building or the extension including all foundations and the structure of the ground floor level is completed.

For all other works – constructed 15% of the overall work.

NOTICE OF COMPLETION

A Notice of Completion to be given to Building Control not more than 5 days after the work has been completed. The notice to contain the following information:

- The name, address, telephone number and (if available) email address of the client, principal contractor, and principal designer.
- A statement from the applicant to say that the works have been completed and complies with all the applicable regulations to the best of their knowledge.
- A statement from both the principal contractor and principal designer to confirm they have fulfilled their duties under Part 2A (duty holders and competence).

PARTY WALL ACT

Should they need to do so under the requirements of the Party Wall Act 1996, the owner has a duty to serve a Party Structure Notice on any adjoining owner if the building work involves any of the following to a Party Wall:

- Support of beam
- Insertion of DPC through wall
- Raising a wall or cutting off projections
- Demolition and rebuilding

- Underpinning
- Insertion of lead flashings

A Party Wall Notice is also required for:

- Any excavations within 3 metres of any part of a neighbouring owner's building or structure, where any part of that work will go deeper than the neighbour's foundations; or
- Any excavations for a new building or structure, within 6 metres of any part of a neighbouring owner's building or structure, where any part of that work will meet a line drawn downwards at 45° in the direction of the excavation from the bottom of the neighbour's foundations, see diagram 7 in the following Government guidance,

https://www.gov.uk/government/publications/preventing-and-resolving-disputes-in-relation-to-party-walls/the-party-wall-etc-act-1996-explanatory-booklet#para_28

A Party Wall Agreement is to be in place prior to start of works on site.

THERMAL BRIDGING

Care shall be taken to limit the occurrence of thermal bridging in the insulation layers caused by gaps within the thermal element (i.e. around windows and door openings).

MATERIALS AND WORKMANSHIP

All works are to be carried out in a workmanlike manner. All materials and workmanship must comply with Regulation 7 of the Building Regulations, all relevant British Standards, European Standards, Agreement Certificates, Product Certification of Schemes (Kite Marks) etc. Products conforming to a European technical standard or harmonised European product should have a CE marking.

The latest edition of the British Standard (including any amendments) applies to any undated references within these specifications.

EXISTING STRUCTURE

Existing structure including foundations, floor, beams, walls, roof and lintels are to be exposed and checked for adequacy prior to commencement of work and as required by Building Control.

Particular care must be taken if the existing external wall is single leaf construction with piers, checks for stability and defects must be performed.

UPGRADING EXISTING SOLID FLOOR

To meet min U value required of 0.18 W/m²K

The existing solid floor slab must be checked for stability and be free from defects, as required by Building Control. The existing floor will need upgrading to ensure adequate damp protection and to prevent heat loss.

Provide a 1600g (400 um) radon membrane over existing floor slab, lapped 300mm, double welted and taped with gas proof tape at joints and service entry points. Carry membrane over cavity and provide suitable cavity tray and weep holes. DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 90mm thick PIR insulation, e.g. Celotex GA4000, 25mm Celotex insulation to continue around floor perimeters to avoid thermal bridging.

A VCL should be laid over (and under if required by the manufacturer) the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed. Finish with 21mm T&G softwood boards laid with staggered joints all to existing house floor levels. Care should be taken to ensure any existing airbricks for the main house are not obstructed by this work. If so, they should be extended through the new floor to external air.

FOUNDATIONS

Trial hole to be excavated to ascertain whether the garage has a continuous foundation across the infill which is adequate to build off. If there is no foundation provide new concrete foundation with a width at least the width of the new wall plus 300mm, mix to conform to BS EN 206:2013 (+A2:2021) and BS 8500-2. Depth be a minimum of 1000mm below ground level, to existing foundation depth or as approved on site by Building Control to suit site conditions. All constructed in accordance with 2004 Building Regulations A1/2 and BS 8004:2015 Code of practice for foundations (+A1:2020). Ensure foundations are constructed below invert level of any adjacent drains. Sulphate resistant cement to be used if required. Please note that should adverse soil conditions, or any major tree roots in excavations be discovered, Building Control to be contacted and the advice of a Structural Engineer should be sought.

NEW TIMBER FRAME WALL TO FRONT

To achieve minimum U Value of 0.18 W/m²K

Outer skin to be 102mm suitable matching facing brick with 50mm vented and drained cavity provided between the stud and brick cladding.

Inner stud to have breathable membrane (a vapour resistance of not more than 0.6 MNs/g) fixed to 12mm thick W.B.P external quality plywood sheathing (or other approved). Ply fixed to treated timber frame studs constructed using 100mm x 50mm treated timbers with head and sole plates and noggins at 400mm ctrs or to s/engineer's details and calculations. Insulation to be 90mm Celotex GA4000 between studs with 40mm Celotex TB4000 over.

Provide vcl and 12.5mm plasterboard over internal face of insulation. Finish with 3mm skim coat of finishing plaster. All junctions to have water tight construction, seal all perimeter joints with tape internally and with silicon sealant externally.

EXTERNAL WALL UPGRADE TO REAR

To achieve minimum U Value of 0.18 W/m²K

Existing garage floor to be exposed and checked for suitability to carry the load from the new stud wall prior to commencement of work and as required by Building Control. Construct an inner leaf of timber studwork using 100mm x 50mm treated timbers with head and sole plates and noggins at 400mm ctrs, ensuring a 50mm clear cavity between existing wall and new stud. Provide a breathable membrane (having a vapour resistance of not more than 0.6 MNs/g) on cavity side of studwork. Insulation to be 90mm Celotex GA4000 between studs with 40mm Celotex TB4000 over. Provide vcl and 12.5mm plasterboard over internal face of insulation. Finish with 3mm skim coat of finishing plaster

All junctions to have water tight construction, seal all perimeter joints with tape internally and with silicon sealant externally. Provide a cavity tray at the base with weep holes at 600 ctrs. Provide horizontal strip polymer (hyload) damp proof course to new leaf minimum. An injected DPC may also be required if one is not already present and working in existing wall. New DPC to be made continuous with floor DPM.

A lesser provision of insulation may be appropriate where meeting such a standard would result in a reduction of more than 5% in the internal floor area of the room.

UPGRADING EXISTING SINGLE SKIN PARTY WALL

The existing walls must be checked for stability and be free from defects, as required by Building Control. Construct an independent studwork lining using 100mm x 50mm treated timbers with head & sole plates and noggins at 400mm ctrs, leaving a gap of 15mm between the wall and the inner face of the studwork to ensure that airborne sound transmission is reduced. Seal the perimeter of the with tape or sealant. Wall to be lined with 30mm total thickness of 10kg/m² plasterboard with staggered joints and with 100mm of mineral wool quilt density 10kg/m³ between studs to provide with 60 minutes fire resistance. Finish with 3mm plaster skim.

EXISTING TO NEW WALL

Cavities in new wall to be made continuous with existing, where possible, to ensure continuous weather break. If a continuous cavity cannot be achieved, where new walls abuts the existing walls provide a movement joint with vertical DPC. All tied into existing construction with suitable proprietary stainless steel profiles.

CAVITIES

Provide cavity trays over openings. All cavities to be closed at eaves and around openings using Thermabate or similar non combustible insulated cavity closers. Provide vertical DPCs around openings and abutments. All cavity trays must have 150mm upstands and suitable cavity weep holes (min 2) at max 900mm centres.

WALL TIES

All walls constructed using brick to timber type retaining wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm ctrs at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS EN 845-1:2013 all installed to manufacturer's details.

DPC

Provide horizontal strip polymer (hyload) damp proof course to both internal and external skins, minimum 150mm above external ground level. New DPC to be made continuous with existing DPCs and with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed. The cavity should extend to at least 225mm below the DPC or where this is not possible provide a cavity tray at the base with weep holes at 600 ctrs. Existing walls may require an injected DPC if one is not already present and working.

LINTELS

- For uniformly distributed loads and standard 2 storey domestic loadings only

Lintel widths are to be equal to wall thickness. All lintels over 750mm sized internal door openings to be 65mm deep pre-stressed concrete plank lintels. 150mm deep lintels are to be used for 900mm sized internal door openings. Lintels to have a minimum bearing of 150mm on each end. Any existing lintels carrying additional loads are to be exposed for inspection at commencement of work on site. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS EN 1992-1-1:2003 Eurocode 2, with a concrete strength of 50 or 40 N/mm² and incorporating steel strands to BS 5896 to support loadings assessed to BS EN 845-2:2013.

For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufacturer's standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.

Independent lintels to have an insulated cavity closure between the inner and outer lintel.

Unless only supporting a roof, lintels to be encased in 12.5mm Gyproc FireLine board with staggered joints, Gyproc FireCase or painted in Nullifire S or similar intumescent paint to provide 1/2 hour fire resistance. All fire protection to be installed as detailed by specialist manufacturer.

INTERNAL DOORS

A lintel suitable for the loads above will be required; a single door will generally require a 150mm deep concrete lintel with 100mm bearings onto masonry. If the dwelling has a protected route for means of escape or is a 3 storey house new doors on to the hallway are to be half hour fire doors.

UPGRADE OF EXISTING ROOF

To achieve U-value of 0.16 W/m²K

The existing roof must be checked for stability and be free from defects, as required by Building Control.

If Roof covering is to be replaced the Roof surface to be 3 layer high-performance roofing felt achieving BROOF(t4) designated fire rating for surface spread of flame with mineral-finished top layer for UV and weather resistance, in accordance with BS EN 13707:2013, all on 18mm exterior grade plywood on firrings to give a 1:40 fall, fixed to existing 130x50mm timber joists. Cross ventilation to be provided using proprietary mushroom roof vent system equivalent to 25mm continuous ventilation.

Flat roof insulation is to be continuous with the wall insulation, but stopped back to allow a min 50mm air gap above the insulation for ventilation. Insulation to be 75mm Celotex GA4000 between joists and 75mm under joists. Ceilings to be 12.5mm plasterboard over vapour barrier with skim plaster finish.

LEAD WORK AND FLASHINGS

All lead flashings, any valleys or soakers to be Code 4 lead and laid in accordance with BS 5534 and BS EN 12588. Flashings to be provided to all jambs and below window openings with welded upstands. Joints to be lapped min 150mm and lead to be dressed 200mm under tiles, etc.

ELECTRICAL

All electrical work required to meet the requirements of Part P (electrical safety) must be designed, installed, inspected and tested by a Competent Person registered under a Competent Person Self Certification Scheme such as BRE certification Ltd, BSI, NICEIC Certification Services or Zurich Ltd. An appropriate BS7671 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 Building Control on completion.

INTERNAL LIGHTING

Install low energy light fittings that only take lamps having a luminous efficiency better than 80 lumens per circuit watt. All fixed to have lighting capacity (lm) 185 x total floor area, to comply with Part L of the current Building Regulations and the Domestic Building Services Compliance Guide.

HEATING

Extend all heating and hot water services from existing and provide new TRVs to radiators. Heating system to be designed, installed, tested and fully certified by a GAS SAFE registered specialist. All work to be in accordance with the Local Water Authorities bye laws, the Gas Safety (Installation and Use) Regulations 1998 and IEE Regulations.

The energy performance of the new components to be assessed. The results should be recorded and given to the building owner.

All accessible pipes to be insulated to the standards in Table 4.4 Approved Document L.

SMOKE DETECTION

Where the new room does not have a external door smoke detection will be required.

Provide a linked smoke alarm detection system to BS EN 14604 and BS 5839-6:2019 to at least a Grade D2 category LD3 standard (Grade A for large house, Grade A, LD2 for large house with 3 stories or more). System to be mains powered with battery back up. At least one smoke detector to be provided in each hallway and landing. In hallways exceeding 7.5m in length, no point within the hallway should exceed 7.5m from the nearest detector and no bedroom door should be further than 3m from the nearest smoke alarm. If ceiling mounted they should be 300mm from the walls and light fittings. Where the kitchen area is not separated from the stairway or circulation space by a door, there should be an interlinked heat detector in the kitchen.

A design, installation, and commissioning certificate for the fire detection and alarm system to be issued to Building Control upon completion of the works.

NOTE: A large dwellinghouse has more than one storey, and at least one storey exceeds 200m².

EXTRACT FOR SHOWER AREA

Provide mechanical extract ventilation to shower area ducted to external air capable of extracting at a rate of not less than 15 l/s. Vent to be connected to light switch and to have 15 minute over run. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

BACKGROUND VENTILATION

Controllable background ventilation at least 1700mm above floor level to be provided to bedroom at a rate of min 10,000mm².

Total number of ventilators installed in a dwellings habitable rooms to be at least 4 ventilators for one bedroom dwellings and 5 ventilators for dwellings with more than one bedroom.

Background ventilators to be tested to BS EN 13141-1.

Background ventilator equivalent area and operation to be measured and recorded.

Noise attenuating background ventilators should be fitted to facades with sustained loud noise.

UNDERGROUND FOUL DRAINAGE

Underground drainage to consist of 100mm diameter UPVC proprietary pipework to give a 1:40 fall.

Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (900mm under drives).

Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material.

Provide rodding access at all changes of direction and junctions. All below ground drainage to comply with BS EN 1401-1 (+A1:2023).

ABOVE GROUND DRAINAGE

All new above ground drainage and plumbing to comply with BS EN 12056-2 for sanitary pipework.

All drainage to be in accordance with Part H of the Building Regulations. Wastes to have 75mm deep anti-vac bottle traps and rodding eyes to be provided at changes of direction.

Size of wastes pipes and max length of branch connections (if max length is exceeded then anti-vac traps to be used).

Wash basin - 1.7m for 32mm pipe 3m for 40mm pipe.

Shower - 3m for 40mm pipe 4m for 50mm pipe.

All branch pipes to connect to 110mm soil and vent pipe terminating min 900mm above any openings within 3m.

Or to 110mm upvc soil pipe with accessible internal air admittance valve complying with BS EN 12380, placed at a height so that the outlet is above the trap of the highest fitting.

Waste pipes not to connect on to SVP within 200mm of the WC connection.

Supply hot and cold water to all fittings as appropriate.

PIPEWORK THROUGH WALLS

Where new pipework passes through external walls the pipework is to be provided with 'rocker pipes' at a distance of 150mm either side of the wall face. The 'rocker pipes' must have flexible joints and be a maximum length of 600mm.

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

DRAINS UNDER FLOOR SLAB

Where drain runs pass under new floor, provide A142 mesh 1.0m wide within bottom of slab over length of drain, mesh to have min 50mm concrete cover.

Bedding to be minimum 100mm compacted granular material (pea gravel or 10mm rounded aggregate) beneath the pipe. Side support and surround to be same material as bedding, compacted up to 150mm above the crown of the pipe.

Where the crown of the pipe is within 300mm of the underside of the slab, the pipework should be surrounded with 150mm concrete as an integral part of the slab.

Penetrations Through Floor Slab

Provide sleeves or flexible joints where pipes pass through the slab. Maintain a gap of at least 50mm between pipe and sleeve, sealed with compressible material to allow for thermal and structural movement.

NEW AND REPLACEMENT WINDOWS

New and replacement windows to be double glazed with 16-20mm argon gap and soft coat low-E glass. Window Energy Rating to be Band B or better and to achieve U-value of 1.4 W/m²K. The door and window openings should be limited to 25% of the extension floor area plus the area of any existing openings covered by the extension.

Insulated plasterboard to be used in reveals to abut jambs and to be considered within reveal soffits. Fully insulated and continuous cavity closers to be used around reveals.

Windows and door frames to be taped to surrounding openings using air sealing tape.

ESCAPE WINDOWS

Provide emergency egress windows to newly glazed habitable room windows and ground floor inner room.

The window should have an unobstructed clear openable area that is at least 0.33m² and have no clear dimension less than 450mm high or 450mm wide.

The bottom of the openable area should be not more than 1100mm above the floor.

The window should enable the person to reach a place free from danger from fire.

Windows less than 800mm above floor level to be provided with suitable guarding and/or safety glass as appropriate.

SAFETY GLAZING

All glazing in critical locations to be toughened or laminated safety glass to BS EN 12600:2002, BS EN 14179 or BS EN ISO 12543-1 and Part N of the current building regulations. i.e. within 1500mm above floor level in doors and side panels within 300mm of door opening and within 800mm above floor level in windows.