Specification

The Bungalow, Atterton Lane, Atterton, Witherley CV13 6JU

Proposed En-Suite Extension

General
All aspects of work to comply with the requirements of the Building Regulations, Statutory Undertakings and all responsible authorities having jurisdiction over the works.
All work shall be carried out safely and in reasonably appropriate conditions.
The contractor shall conform to the recommendations of British Standard Code of Practice, with particular reference to BS8000, an Agrement Board Certificate or other approved quality assurance scheme, and in accordance with all manufacturers' details and recommendations.

Demolition
Existing extension forming WC off bedroom to be demolished.

Foundations
600mm x 750mm thick C20P, 20mm agg concrete trench fill foundation taken down to min.depth of 1000mm below finished ground level, subject to ground conditions, and to the satisfaction of the Building Control Officer.

Ground Floor
Below Slab Insulation
65mm thick sand/cement screed, 150mm C20P, 20mm agg oversite concrete slab, building paper to BS1521:1972 grade B1F, 75mm Kingspan Kooltherm K3 floorboard (0.023W/mK), (plus perimeter upstnd), 1200g gauge Visqueen DPM, 50mm sandblinding and 150mm hardcore
DPM to be taken up and linked and linked with DPC at wall abutment.
All to achieve a minimum U value of 0.22 W/m2K Part L

Walls below D.P.C.
External walls below the d.p.c. shall be constructed in class B engineering brickwork laid stretcher bond using 1:3 cement mortar.
Internal skins to be constructed in 7N/mm2 blockwork laid stretcher bond using 1:3 cement mortar. Cavity to be filled with lean mix concrete up to a minimum of 225mm below the wall DPC. Weepholes at max.900mm.horizontal centres.

D.P.C.
A continuous d.p.c. (hi-load or similar) to B.S.6398 class B. bedded in 1:3 cement sand mortar
at a minimum height of 150mm above G.L.
Windows and door openings to be closed using a cut block cavity closer incorporating a vertical d.p.m. together with 25mm Rockwool in a polythene sock to prevent cold bridging

External walls (Normal exposure conditions)
New Walls
To achieve U-Value of 0.30 W/m2K
External walls shall consist of 102.5mm facing brickwork external outerleaf to match existing brickwork laid in 1:1:6 mortar, 100mm full fill Rockwool Cavity Wall Insulation Batts, and 100mm 3.5N Durox Aircrete Supabloc blockwork inner leaf all installed to full manufactures instructions.
Skins to be tied together at 900mm ctrs. horizontally and 450mm ctrs vertically and at 250mm ctrs at all openings, with double triangular stainless steel ties.
The cavity will not be closed at the eaves and the roof insulation will be continuous with the wall insulation
Cavities to be closed at window and door jambs using special cavity/reveal blocks and incorporating vertical d.p.c.
12.5mm plasterboard dry lining with 3mm skim finish to inner leaf providing proprietary sealant at wall/door junctions.

Lintels
Proprietary insulated **Catnic** steel combined lintels to B.S.2989 with cavity trays to external walls. Cavity trays to incorporate stop ends. Internal lintels to be pre-stressed concrete. All lintels to have min. end bearing of 150mm each end on full blocks where possible fully bonded in mortar.
Provide precast concrete lintels over service ducts passing through foundation walls. Brickwork not to overhang lintel by more than 25mm.
Catnic Lintel Codes:
Window Opening:
CH90/100 Heavy Duty Open Back Lintel, SWL :1/19.1KN-48
Internal Lintels:
CN5XA

Weepholes
Provide proprietary plastic weep vents at approximately 450mm centres to brick course immediately above all external openings with cavity trays and a minimum of two weepholes per opening.

Window
To be PVCu sealed Argon gas filled low-E double-glazing units (4-16-4), K Glass to achieve 1.8W/m2K with mastic sealant to all external frames/wall junctions. Trickle vents to heads of frame and have a minimum openable area of 0.33m2, 600 x 6000mm

Ventilation

To have provision for rapid ventilation by opening windows with total area of at least 1/20th of the floor area of the room.

Background ventilation of 8000mm2 achieved by trickle ventilators located to top of frame of windows to habitable rooms and 4000mm2 to others.

En-suite to have extraction fan to achieve 15litres/second rate of extraction with 15 minute overrun, activated by light pull cord switch.

Roof construction

To comprise of 420 x 330mm single lap concrete interlocking roof tiles to B.S.473 & B.S.550,to match existing tiles. Min headlap: 65mm Maximum gauge 100mm to B.S.473 & B.S.550, (sample to be provided) on 25 x 38mm treated softwood battens fixed at gauge to suit tiles, to rafters. Fixing to be through layer of reinforced sarking/roofing felt to B.S.747 type 1F. Felt to have min.150mm lap and sealed.

Roof structure to be to be pre-fabricated trussed rafters at pitch to match existing, by an approved specialist supplier to B.S.5268 part 2 1991 and part 3 1985 using machine stress graded timber which is to be vacuum impregnated with an approved preservative.

Full calculations of loading and strength, and drawing showing all required details of construction of trussed rafters will be submitted by the Truss Rafter supplier/manufacturer.

Conditional approval of trussed rafters is requested on this basis.

Valleys to be formed using 18mm marine ply valley boards supported off rafters and 50 x 50mm s.w. bearers. Valley to be mitred and lined with code 4 lead soakers 200 x 100mm each side

Galvanised M.S straps fixed at ceiling level in strict accordance with Document 'A' structure part A of the Building regs 1991.

Trussed rafters to be fixed to proposed 75 mm x 100 mm softwood wall plate using proprietary truss clips, and to existing wallplate.

Wallplates to be strapped wall using 32 x 5 x 100 mm galvanised steel straps fixed to wall at max. 2.0 m ctrs. Galvanised M.S straps fixed at rafter, ceiling and floor joist level in strict accordance with Document 'A' structure part A of the Building regs 1991.

100 x 25 mm softwood longitudinal and diagonal wind bracing all in accordance with B.S5260

Underside of ceilings to be finished with 12.5mm foil-backed plasterboard and 3mm skim finish.#

Insulation to Roof

Insulation and ventilation to achieve a U value of 0.29W/m2K

Second breather Membrane to be laid on top of insulation.

Roof void to incorporate 270mm thick Rockwool insulation Quilt, with 100mm laid between joist member and 170mm layer over joists in opposite direction. All to achieve a minimum U-Value of 0.16W/m2K

Roof to be ventilated at eaves using an RV601 rafter ventilator by Glidevale or other proprietary PVCu eaves ventilator giving 10mm continuous air gap incorporating insect mesh and 50mm clear gap.

Electrical Installation

New electrical installation to meet the requirements of Part P (Electrical Safety) and to be designed, installed, inspected and inspected and tested by a person competent to do so

Supply will be provided by the local electricity supply authority at 240 volts/50Hz single phase, 100 amp supply.

The contractor must confirm this before commencement.

The local electricity supply authority shall indicate the primary method of earthing

The installation must comply with:

The Building Regulations, The Regulations for electrical installations issued by the Institution of Electrical Engineers current edition, The health & Safety at Work Act, Electrical Equipment (Safety) Regulations, British Standards and relevant Codes of Practices

Only new materials must be used and comply with the standards above, and be carried out using PVC insulated and PVC sheathed cables, installed in roof spaces and under floors and concealed within the building structure throughout.

On completion the contractor must carry out tests to comply with the requirements of section 514-5 part 6 of the regulations for electrical equipment of buildings as issued by the institution of electrical engineers.

The contractor shall provide all necessary equipment required for test and record results on an official completion certificate and inspection certificate issued by N.I.C.E.I.C. The contractor must inform the Engineer of the time and date of the proposed test, giving the required notice, in order that the tests may be witnessed.

The contractor shall issue the Electricity Board and Building Control all necessary test notices and shall make all necessary arrangements for connection of the mains supply

Lighting to comprise of light fittings that take compact fluorescent lamps having a luminous efficacy greater than 40 lumens per circuit-watt. External lighting to be controlled by sensors, which automatically extinguish when there is enough clear daylight or when not required at night.

Electrical switches and sockets to be located between 450mm and 1200mm from finished floor level.

All in accordance with approved document L1

Fire Safety

Smoke detectors to be installed and hard wired in to main electrical installation in Hall and Landing, system to be linked mains operated smoke alarms wired to a separate fused circuit with battery back up, minimum 300mm from any wall or light fitting to BS 5839 part 1 1988

The smoke alarm system to be designed and installed in accordance with BS5839 6:2004 Part B

The minimum height or width of the escape opening will not be less than 450mm

Drainage below ground
All drainage works shall be carried out using clay pipes to BS 65 and BS EN 295: 1991 jointed with flexible couplings complying with BS 2494:1990. All laid in accordance with BS Code of Practice BS 8301:1985
Pipes to be Hepworth Supersleve vitrified clay pipes

Surface Water Drainage: Install new RWP's in position shown and connect into existing surface water drains.

Foul Water Drainage: New Foul Water Drain connections to connect into existing foul water inspection chamber as detailed, Hepworth supersleve clay pipes and junctions to B.S.65. Make new connections in approved manner from proposed sanitary appliances to proposed .
Drain runs under building or with less than 450mm cover to have min 150mm thick C20P 20mm agg bed and surround.
Drain runs passing through the building to be protected by concrete lintels. Any drain within 1m.of adjacent building where trench bottom is lower than wall foundations, the trench shall be filled with concrete to underside of adjacent foundations
All drains shall be laid and tested to the satisfaction of the Building Control Officer.

Drainage above ground
100mm UPVC w.c. connection via 75mm d.s.t. S.V.P. as indicated on the plans. 40mm UPVC waste from shower.
32mm UPVC waste from wash hand basin and all via d.s.t's to B.S. 5255. 100mm UPVC soil stack and vent pipe on the outside of the dwelling.
40mm waste via d.s.t. from sink to back inlet gulley via connection cast in slab.

Rainwater goods and disposal
To be UPVC 112mm gutters connected into new RWP's.