

CONSTRUCTION NOTES...

Downtakings...
Existing roof over rear of house to have tiles, sarking removed to allow new extension construction.

FOUNDATIONS...

Foundations to be constructed in RC28/35 concrete to BS 8500 with a maximum aggregate size 20mm. Foundations are to be 200mm thick reinforced with A393 bottom mesh and 75mm cover. Widths are to be as noted on plan.
Strip foundations laid on load bearing strata, 450mm below finished ground level.
External Walls: house 700x200mm, Dwarf wall 500x200mm
Ground conditions must be checked on site as the above sizes are for good ground bearing conditions.
Structural Engineer to be informed if any variance in ground conditions occur over site.
Top of foundations minimum 450mm below finished ground level
Any step in foundation to be 225mm high with a 500 mm horizontal overlap.

SUBSTRUCTURE:

300mm dense cavity blockwork substructure 100 /60 /150, built up 450mm to ground level then to finished floor level 150mm block wall to dpc level with made ready.

DPC:

All horizontal and vertical DPC's to be 1200 gauge and placed 150mm minimum above ground level horizontally and 150mm vertically.
All dpc/dpm members to overlap. DPM joints in floor min. 150mm folded & taped .

GROUND FLOOR:

125mm concrete laid over site with 50mm Celotex GA4000 set against wall all round as separation to external set over lightweith gauge polythene over 125mm Celotex GA4000 insulation board over full floor area laid over 1200 gauge polythene DPM with any joints rolled and taped laid over the full floor area laid over 50mm levelling sand on 200mm compacted hardcore
All service drainage pipes 100mm diameter to be laid within the new floor feeding out to new drainage prior to concrete being laid to service the bathrooms and kitchen

FIRST FLOOR:

22mm t&g waterproof grade chipboard flooring screw fixed to extend existing master bedroom as noted on floor plan layout. Install where required mineral wool sound insulation min. 50mm thick between joists

SUPERSTRUCTURE..

Lean-to extension at ground floor to have cavity wall construction with external leaf of 20mm rendere on 100mm dense blockwork the 50mm cavity the structural timber frame inner leaf as dormer wall construction. Dormer extension walls to upper floor area formed with timber structural frame with external finishes as noted in the following descriptions.
Dormer to extended upper floor hall area and to front wall of bedroom extension...
PC concrete tile plan to match colour of existing roof nailed to battens and counter battens fixed through Tyvek Reflex vapour barrier to 9mm OSB board nailed on 147x45mm structural timber frame.
Dormer to master bedroom and en-suite on rear elevation...
Structural timber stud frame for extension formed with tyvek reflex breather paper stitch stapled to 9mm sheathing OSB Board on 147x45mm structural framing at 600mm ctrs with double top and bottom rails. All joints in binder to be above studs and staggered. Structural frame held in place with wallplate nailed to existing timber roof/ceiling structure as required all round ready to form new walls
Stud walls lined internally with 12.5mm DUPLEX board, taped and skim coat plaster. Insulation quilt to be 150mm thick. Fit 25mm thick Celotex GA400 insulation to face of external walls of extension at first floor then face all with 12.5mm wallboard all taped /plastered joints
Timber lintols over openings to be constructed with 3x197x45mm C16 timbers spiked together at 300mm staggered centres. Support to be as follows...1No cripple stud up to opening width of 1200mm, 2No cripple studs to openings of 2100mm, 3No cripple studs to openings to 3600mm.
Engineer design for any opening larger than 3600mm
Form new window to bedroom to match thoses existing in style

ROOF:..

Pitched roof finish with PC concrete tiles to match existing all nailed to timber battens and c/battens and through 1 layer roofing felt stitched on 9mm OSB board to prefabricated roof trusses set at 600mm ctrs fixed with galvanised truss clips to timber wallhead. Pitched roof rafters to be 210mm min. and 225mm at roof level to allow for insulation and cavity.
Install 2 layers of 150mm thick insulation quilt throughout new roof and over existing as necessary maintain 300mm depth faced with 12.5mm Duplex wallboard nailed to underside rafters with all joints taped and plastered. Stub walls in loft to have 200mm insulation quilt between timbers.
Roof ventilated using 25mm eaves vents full length and vent tile at high level to 5mm per metre run.
Flat roof sections to have single layer pvc finished bonded over 12mm plywood nailed to 50mm wide furring pieces nailed to roof joists forming slope edges all round over roof tiles
Form gutter at wall/roof junction with code 5 lead flashing lining dressed under tiles and up wall 150mm on both sides of roof feeding into new pvc gutters 100mm deep flow fixed at 600mm ctrs, laid to fall to 75mm dia. downpipes fixed at 1800mm ctrs up wall before connecting to new drainage feeding into existing 100mm dia pvc pipes for both surface and foul drainage.
Lean to roof formed with single lar PVC lais over 15mm sarking screw fixed to 225x45mm joists set at 600mm ctrs nailed to galvanises truss clip screwd to 200x50mm C16 joist bolted to wall at 600mm ctrs along length of extension and to tripl joist lintel over the glazed wall area. See engineers details. Leave 50mm air gap to yu/s sarking and 180mm celotex GA4000 insualtion board faced on inside with 12mm fgypsum wallboard all taped and plastered with wall board.

PARTITIONS:

Partitions constructed with 97x45mm framing at 600mm crs with double top and bottom stud frame if loadbearing, single if non-load bearing. All frames infilled with 25mm mineral wool batts or quilt for sound insulation with minimum thickness of 25mm and density of 10kg.m3. (wire reinforced if required) 12.5mm plasterboard with density of 10kg/m2 screw fixed at max. 200mm ctrs both sides with taped/ filled joints between board on wall and ceiling and at all junctions.
95x12mm pencil round skirting boards all round with door blocks giving break to door facings.

ELECTRICAL:

All electrical work to be installed, designed, tested and constructed in accordance with BS 7671:2018 (4.5) fitted with RCB's. Any recessed lights fitted with fire hoods to maintain fire resistance of 30 minutes. Utility extract 60l/sec, shower, wc extract 15l/sec Switch outlets positioned min. 350mm from internal corners, projecting walls or similar obstructions and not more than 1.2m above floor level. Light switches positioned between 900 and 1100mm above floor level. Sockets should be min. 150mm above worktops and 400mm above floor level.
Electrical installation by qualified contractor with membership of SELECT, NICEIC, UKAS who can provide Electrical Certificates at compleation of project.

SMOKE DETECTORS/FIRE ALARM UNITS:

Electrically operated smoke detectors/fire alarms wired to independant circuit electrically protected consumer unit, complete with battery backup. All detectors to be interconnected to ensure all operate when activated. Smoke detectors located maximum 3m from bedrooms and 7m from lounge, 300mm from light fittings. Heat detector in kitchen, CO2 detector next to gas wall mounted boiler.
Supply and fit Grade D fire detection and fire alarm sytem in accordance with BS5839: Part 6: 2004 comprising at least 1 powered smoke alarm and at least 1 mains powered heat alarm in kitchen

PLUMBING & DRAINAGE:

Surface water drainage of 100mm dia. deep flow PVC gutters with brackets at 600mm ctrs screwed back to fascia & 68mm dia. PVC downpipes with holderbats at 1800mm crs, Foul drainage of 100mm dia. UPVC drains laid to 1 : 60 fall with 450mm min. invert depth at manhole complete with all fittings etc. laid as per manufacturers instructions and trenches backfilled with pea gravel, round pipes all as per BS 8301.Where pipe passes under walls a lintel should be provided over opening formed to prevent any pressure on drainage. 100mm dia pvc foul drainage pipes connected with disconnecting manhole in garden
Trenches backfilled with pea gravel. Sanitary pipework installed to BS EN 12056-2:2000
Internal drainage pipe sizes to be as follows:-
WC.....100mm uPVC, WHB.....32mm dia. ABS
BATH.....40mm dia. ABS SINK.....50mm dia. ABS
SHOWER.....40mm dia. ABS...fit removable grate for cleaning, 75mm deep seal trap.
All drainage pipework exceeding 6.0m to be vented with internal access for rodding purposes to be located 1.0m above floor level
All drainage pipes internally are to be connected separately to the soil vent pipe
Foul and surface water drainage system require to be inspected and tested with both open tests and final drain test to be carried out. Twin pipe system in garden grounds
Hot and cold water taken to combi boiler in utility room with T off to kitchen sink only for drinking water.
Hot water storage should not be less than 60 degrees and distributed at a temperature of not less than 55 degrees C. Final discharge pipe from megaflo system to be at ground floor taken to rear wall .
Discharge from sanitary fittings to prevent scalding should not exceed 48 degree C.
If thermostatic mixing valves (fitted to bath) are used then the above temperatures apply to BS EN 1111:1999 or BS EN1287: 1999 and fitted as close as possible to outlet.
S&VP to rise min 900mm above any window within 3.0metres.
Manholes to be 600mm diameter with heavy weight cover in driveway and road.
All hot and cold water heating pipes and hot water pipes to be insulated to comply with BS:5422 : 2001. Thermostatic mixing valve limited to max 48degree C and comply with BS5422: 2009. Fire hydrant located within 100metres of development.

SANITARYWARE:

Walls clad with ceramic wall tiles fixed with moisture resistant BAL grouting on 12.5mm moisture resistant plasterboard on timber framing.
Anti-scald valve fitted to BS:1415 to shower/ bath. Trap accessible for cleaning
Walls round ground floor wc to be fitted with 12mm plywood for future grab rails fittings under the finished plasterboard

MECHANICAL VENTILATION:

Mechanical extract fan capacities ducted to external air wired to independent switch :-
Ventilation throughout house to be to BS EN 13141-1:2004
Kitchen...60l/sec, Utility room...60l/sec, bath, shower & wc...15l/sec
Vertical ducts to be fitted with condensation trap. All ducted to flush fitted slate vents on rear roof as noted on elevations. Trickle vent to all rooms to be 12400sq.mm
Fit humidity control extract fans in ground floor toilets.
Infiltration of air into buildings is to be prevented as far as reasonably practicable by:
A...sealing dry lining junctions between walls/ceilings/floors/window/door/roof openings.
B...Sealing vapour control membranes in timber framed & other framed panel construction.
C...Sealing at services pipe penetrations through fabric of building/round pipe service boxing.
D...Fitting of draught exclusion strips in the frames of opening sections of windows, external doors and rooflights..

CENTRAL HEATING:

Gas fired combi boiler extended radiator system for new rooms. Fit new thermostatically controlled radiators in new rooms as noted or as directed on site. 7 day timer and boiler interlock control.
Commissioning certificate for installation to be submitted on completion (if new boiler). Heating system capable of maintaining temperature of 21oC in at least one apartment and 18oC elsewhere when outside temperature is minus1oC

GLAZING:

All glazing below 800mm to be toughened safety glass to BS6262: Part 4 2005
All glazing below 1500mm in doors and side lights to be toughened safety glass to BS 6262:2005
Protective barrier fitted in front of all glazing below 800mm above floor level capable of resisting loads specified in BS 6399:Part 1:1996

LEADWORK:

All leadwork code 5 to BS EN 12588 ragglad into walls with min. 150mm upstand fixed in place with proprietary fixing clips to BS 6915 at max. 450mm ctrs.
Lead sealant applied to raggles. to be max 200mm

WINDOWS /DOORS: ...

Double glazed high performance Upvc framed windows with adjustable trickle vents in head frame. Frame to have a similar finish to existing house all round on both sides prior to fitting. All safety/ toughened glazing to be designed to BS6262: Part 4 : 2005
External doors to be high performance timber with double glazed panels.
Internal doors to match existing.
Trickle vents in window frame to apartments 12,000sqmm, all other rooms 10,000sqmm
Trickle vents should be min 1.75m above finished floor level.
Timber cills/ apron internally to be 19mm thick.
Windows to have opening sections as per elevations with internal locking mechanism.
External doors to have 5 lever locking mechanism and flush fitted threshold bar.
Restrictor stays to be fitted to all new windows opening over access routes.
All new doors and windows to have U-value of 1.4, bathroom and en-suite windows to be opaque.
All internal pass doors to accommodation rooms to be 838mm wide, external door 900mm wide

ENERGY...

Minimum of 75% of fixed light fittings are to be low energy type in compliance with Technical Standard 6.5.1. External lighting to be low energy fittings with PIR activation.
Heating and hot water system inspected and commissioned in accordance with manufacturers recommendations and Technical Standard 6.5.1
EPC and sustainability certificate for each house to be displayed within property referred to .

SECURED BY DESIGN (SBD)...

Doors ... Front entrance doorsets shall be certificated to one of the following standards: PAS 24:2007 (*Note 21.1.1*) or WCL 1 (*Note 21.1.2*)
Windows ... The SBD standards for ground floor, basement and easily accessible windows (*Note 28.1.1*) are as follows: •BS 7950: 1997 or WCL 4 (*Note 28.1.2*)
All windows must incorporate key lockable hardware unless designated as emergency egress routes,1 b

STRUCTURAL NOTES...

All structural timber to be grade C16 to BS 5268 *unless otherwise specified by Engineer.
All lintols in timber frame: 3/197x45Dp timbers supported on double cripple studs at each end. All timber to timber fixings at bridles, beams etc. made using fully nailed joist hangers speedy type. Founds built off original subsoil soil bearing pressure 200kN.m2. Engineer informed of soft spots
Concrete grade C35 to BS 8500 parts 1&2.with min cement content 250kg/m3.
Top of foundation 450mm min below finished ground level
7N dense blockwork min density 1800kg/m3 and mortar designation (111) all to BS5628

WATER EFFICIENCY...

Water efficient fittings should be provided to all WCs and WHBs within a dwelling. Dual flush WC cisterns should have an average flush volume of not more than 4.5 litres. Single flush WC cisterns should have a flush volume of not more than 4.5 litres. Taps serving wash or hand rinse basins should have a flow rate of not more than 6 l/min. When specifying water efficient fittings consideration should be given to the operational flow rates that some heating or hot water appliances, such as combination boilers, need to activate their water heating function.
When installing low volume flush WCs, the pipe diameter, discharge and gradient interrelationship of the drainage system is critical in order that the new and any existing sections of the drain operate as intended. Plumbing and associated water installations should be carried out and commissioned by persons who possess sufficient technical knowledge, relevant practical skills and experience for the nature of the work undertaken.
An approved Certifier of Construction, who has been assessed to have the professional skills and relevant experience, can certify compliance of plumbing, heating or drainage installations

LOFT ACCESS...

Loft access hatch is in wall at top landing. Install two pendant lights with switch located near hatch opening for ease of use at first floor level


ELEMENTAL U VALUES FOR BUILT FABRIC...

House ...	Roof 0.11	Floor 0.15,	Wall 0.17
Windows	1.40	Doors	1.40

GENERAL...

- All electrical work to be to the latest IEE rules and regulations with electrical work undertaken by contractor who can sign electrical completion certificate.
- The building owner is responsible for notifying the Local Authority when the works are due to start on site. Any change however minor should be discussed with the Local Authority prior to carrying out any works as any unspecified works may require an amendment to building warrant.
- All service position on drawings are indicative only. The building owner should contact all services to locate exact positions of all services required.
- All apartments to have translucent glazed openings with area of at least 1/15th of the floor area of the apartment located in an external wall or in a wall between the apartment and a conservatory.
- Construction and work carried out to ensure there are no substantial thermal bridges or gaps of insulation occur within building elements.
- Timber stud frame details for insulation / acoustics / air barrier are to be applied

STRUCTURAL ENGINEERS...
Design certificate and specifications for all steel and structural timber requirements to be adhered to.
Steel work fabrication certificate or certificate of performance is to be provided.
Roof truss manufacturers certificate is to be provided.

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Project	FF alrerations to form bed & study	Dwg	A1441.23.12	
Title	Specifications...	Date	27.10.23	
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