Ground floor:

70mm concrete screed to be laid on top of 500g polythene vapor barrier over 150mm Celotex flooring insulation or similar. With 25mm Celotex insulation 'up standing' insulation around perimeter to prevent 'cold bridging'. All to be sat upon the existing 150mm reinforced concrete slab. Floor U value to achieve 0.16 W/M²K

Drainage & Plumbing:

Foul - above ground waste sizes, shower 40mm dia. hand basin 32mm dia. all with 75mm deep seal traps and rodding access at all connections and change in direction. Hot taps to be on the left of all sanitary appliances. 110mm dia. soil and vent pipe to en-suite shower vented to external air a minimum 1.0M above eaves level. All other soil pipes to be fitted with air admittance valves sited 450mm above hand basin level. - below ground - 110mm Osma drain laid to fall a minimum 1 in 70 on a bed of pea gravel or shallower than than 450mm to be concreted. Osma plastic manholes to connect manholes to connect into existing foul sewer on saddle connection in accordance with SWW specification and supervision. Hot water supply must NOT exceed 48°C, blending valve should be mounted as close to the taps as possible. Water storage vessels should not allow water to exceed 100°C

Rain water goods:

100mm uPVC guttering into 65mm down pipes (to roddable gullies) to 100mm PVC pipes and fitting into existing storm drain system.

Wall Construction (timber frame and cladding):

External walls to be fitted with black Larch - fitted horizontally, fitted to vertically 38mm x 50mm battens (to allow clear ventilation) Counter batten with 38mm x 50mm battens fitted horizontally fixed over ACTIS Boost R breather quilt insulation. Fixed to 9mm OSB of PLY boarding onto 140mm x 38mm CLS timber frame. Studs at 600mm. ACTIS Hybris 105 to be fitted the inside of the timber frame (leaving 35mm clearance) to ACTIS H Control insulation fitted to inner face of timber frame. This will have all joints lapped and taped to create a vapor control layer (VCL) held in place using 38mm x 50mm battens to create a service void. Inner face to be finished with 12.5mm plaster-board and 5mm thick gypsum skim to receive decoration. Internal stud partitions: 90mm x 38mm CLS stud-work at 600mm centers with head and sole plates and half height noggins. 90mm Rockwool insulation to center (density of 10-60Kg/M₃). Internal face to be finished with 12.5mm plaster-board and 5mm thick gypsum skim to receive decoration. Walls U value to achieve 0.18 W/M²K

Flat roof (warm roof): Flat roof to be of a 'warm roof construction' using 240mm Engineered I beams ceiling joists set @ 400mm centers. To this fix a VAPOR barrier and 9mm PLY with 120mm thick PIR Celotex or similar. To this fit 18mm thick wbp sheeting ply to top face, finished with GRP roofing supplied and fitted in accordance to manufacturers specification and instructions. GRP roof finish to AA, AB or AC class fire rating. Internal ceiling to finished with 12.5mm Gyproc plasterboard skimmed to clients choice

Roof U value to achieve 0.16 W/M 2 K

Lateral restraining:

Lateral retaining to gable wall to be provided by 30mm x 5mm thick galvanised mild steel straps at a maximum of 2.000mm centre located over / under in-line noggins and fixed to min. 3 No. trusses using 50mm long No. 12 wood screws into each truss and noggin.

RS = lateral strap under rafter

Windows & Doors:

uPVC windows with 28mm Low E Argon filled insulated and double glazed sealed units with 20mm air gap. Trickle vents equivalent to 8,000 sq. mm. Glazing to windows with a sill height less than 800mm to be fitted with toughened safety glass to BS 6206.

Additional mechanical ventilation to rooms in the following areas:-

Kitchen - 60 liters / second WC - 15 liters / second

Ensure a 10mm air gap to WC doors. Extractor fans to be installed in accordance to Approved document F1 appendix E 'Good practice guide to the installation of extractor fans for'. All new windows and doors to be rebated minimum 25mm behind external timber cladding. Ensure all new windows achieve 1.6W/M₂K. Maximum sill height 1,100mm. Fixed mechanical ventilation and any associated controls must be commissioned and tested. Notice of test results are to be provided on completion. Ensure all new external doors achieve a minimum U value of:-

3.0W/M₂K for solid door up to 40% glassed

1.8W/M₂K for doors with 40% - 60% glassing

1.6W/M₂K of doors with more than 60% glassing

All doors to be fitted with toughened or laminated safety glass and any glazing within 300mm of a door to be toughened or laminated safety glass. All to BS 6206. All windows and doors to be designed to PAS 24 or equivalent security standard, and installed in accordance with the manufacturers details.

Smoke & Heat detectors:

Mains operated smoke and heat detector to BS EN 14604 2005 with battery backup to be fitted at positions marked thus:-

HD = Heat detector SD = Smoke detector

Smoke detector to cover minimum of 7.5M radius on each floor level. All smoke and heat detectors must me interlinked.

Electrical installations:

All electrical work must be carried out by a registered scheme member who will issue a certificate of conformance in accordance to BS7671. All lighting to be energy efficient compact fluorescent or LED. All switches, sockets and electrical outlets are to be set between 450mm and 1.200mm from FFL.

Heating:

Air-to-water air source heat pump to feed radiators. Design, specification and installation as per manufacturers recommendation. Details to follow.







Rear - South elevation (scale 1:100)

| W1 | 3,600 x 1,350 | |
|-----|---------------|---------------|
| W2 | 900 x 2,100 | |
| W3 | 900 x 2,100 | |
| W4 | 900 x 2,100 | |
| W5 | 900 x 2,100 | |
| W6 | 1,800 x 1,050 | |
| W7 | 1,800 x 1,050 | |
| W8 | 1,200 x 1,050 | |
| W9 | 1,200 x 1,050 | |
| W10 | 1,200 x 1,050 | |
| W11 | 600 x 1,050 | Obscure glaze |
| W12 | 1,050 x 1,350 | |
| W13 | 3,600 x 1,350 | |
| W14 | 900 x 2,100 | |
| W15 | 900 x 2,100 | |
| W16 | 3,600 x 1,350 | |
| W17 | 1,200 x 1,050 | |
| W18 | 1,200 x 1,050 | |
| W19 | 1,800 x 1,050 | |
| W20 | 1,800 x 1,050 | |
| W21 | 1,200 x 1,050 | |
| W22 | 1,200 x 1,050 | |
| W23 | 600 x 1,050 | Obscure glaze |
| | | |

Window schedule

Stairs:

Stairs to conform to BS 5395-5 and constructed as follows:-Rise to be 155mm min to 220mm maximum

Going between 245mm to 260mm with 25mm nosing or - Rise to be 165mm min to 200mm maximum.

Going between 223mm to 300mm with 25mm nosing. Width - 800mm clear between strings. Headroom - minimum 2M measured

vertically above nosing. Guard-rail to landing - 1.0M high and inclinable. No space in the construction to exceed 99mm. Maximum pitch of stair case to be 42°

Ambulant disabled steps:

The approach to the proposed steps will be on good firm and level ground. The gradient must not exceed 1 in 20. The width will be no less than 900mm. The flight will be unobstructed and the rise of a flight between landings is not more than 1.8M. Each flight will have a top and bottom and intermediate landings if necessary. The rise of each step must be uniform and between 75mm and 150mm. The going of each step must not be less than 280mm. If the flight contains three or more steps, a continuous hand rail will be provided on one side and be between 850mm and 1.0M in height and will extend a minimum of 300mm beyond the top and bottom nosing.

Fire protection:

All steel beam are to be fire protected to a minimum 30mm fire resistance by cladding with 15mm Gypsum Glasroc F Firecase fireboard. To be installed as per manufacturers data sheet.



| Door schedule | | |
|---------------|---------------|----------------------|
| D1 | 1,050 x 2,100 | Disabled Threshold |
| D2 | 1,800 x 2,100 | French door |
| D3 | 1,800 x 2,100 | French door |
| D4 | 900 x 2,100 | Fire escape door |
| D5 | 1,800 x 2,100 | French door |
| D6 & D7 | 1,000 x 1,981 | Disabled access door |
| D8 to D18 | 838 x 1,981 | |
| D19 to D26 | 760 x 1,981 | |
| D27 | 610 x 1,981 | |



The approach to the proposed building will be on good firm and level ground. All access ramps and pathways will not be greater than 1 in 20. Steps to have a maximum riser of 150mm with a minimum going of 280mm. Handrails to be provided where there is three steps or more. All doorway thresholds will not exceed 15mm in height. All ground floor doorways and corridors to have a minimum clear width of 900mm. For electrical outlet positions - see electrical installation notes . All means of access to comply with Approved Document Part M. Doorway widths to be:



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