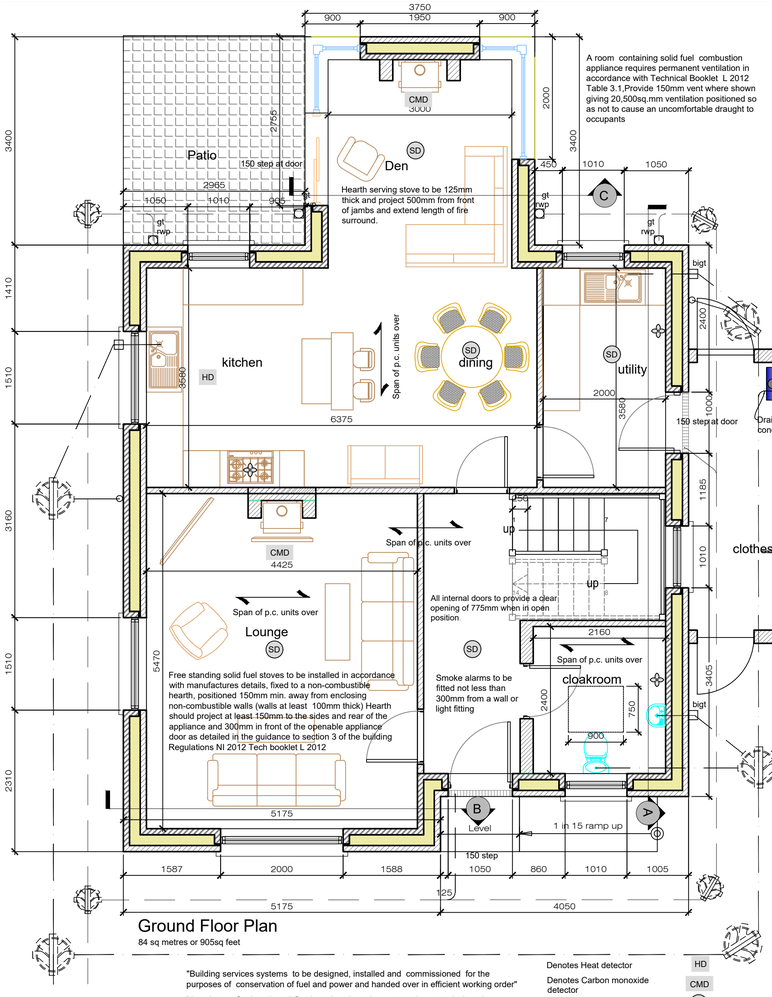



## Ground Floor Plan

84 sq metres or 905sq feet

"Building services systems to be designed, installed and commissioned for the purposes of conservation of fuel and power and handed over in efficient working order"

"A notice confirming that all fixed services have been properly commissioned, confirming that a commissioning plan has been followed and test results confirms the performance is reasonable, shall be provided, signed by a suitably qualified person and a copy given to the building owner and District Council".

A room containing solid fuel combustion appliance requires permanent ventilation in accordance with Technical Booklet L 2012 Table 3.1,Provide 150mm vent where shown giving 20,500sq.mm ventilation positioned so as not to cause an uncomfortable draught to occupants

Hearth serving stove to be 125mm thick and project 500mm from front of jambs and extend length of fire surround.

To prevent build up of foul within manhole SVP should be at least 1200mm away from manhole. When forming a 90 degree turn at a manhole location a 45 degree bend either side of the manhole should be employed

Condensing oil boiler in patent housing

Span of p.c. units over

Span of p.c. units over

Span of p.c. units over

All internal doors to provide a clear opening of 775mm when in open position

Smoke alarms to be fitted not less than 300mm from a wall or light fitting

Free standing solid fuel stoves to be installed in accordance with manufactures details, fixed to a non-combustible hearth, positioned 150mm min. away from enclosing non-combustible walls (walls at least 100mm thick) Hearth should project at least 150mm to the sides and rear of the appliance and 300mm in front of the openable appliance door as detailed in the guidance to section 3 of the building Regulations NI 2012 Tech booklet L 2012

| | |
|---|---|
| Denotes Heat detector | HD |
| Denotes Carbon monoxide detector | CMD |
| Denotes Smoke detector | SD |
| Denotes extractor fan to external air | |

WHOLE HOUSE VENTILATION
Method 1 of Technical booklet K for whole house ventilation to be used, provide PIV units to comply with Tabel 2.2 of Technical booklet K ie min of 0.3l/s per m² of floor area to be provided.
BACKGROUND VENTILATION (PIV)
Provide Positive Input Ventilation System to provide positive pressure whole building ventilation. System design to be submitted to Building Control for approval. Unit should be installed as high as is practical and not within 400mm of the junction of ceiling/ wall. Terminals should be located and directed to avoid draughts. Where ducts, etc. are provided in a dwelling with a protected stairway, precautions may be necessary to avoid the possibility of the system allowing
smoke or fire to spread into the stairway.
To ensure good transfer of air throughout the dwelling, there should be an undercut of minimum area 7600 mm2 in all doors within the dwelling above the floor finish. (e.g. this is equivalent to an undercut of 10 mm for a standard 760 mm width door.)
PIV controls should be set up to operate without occupant intervention, but may have manual or automatic controls toselect the boost rate.
NB
Contractor/ client may use alternative ventilation system but only with strict approval by building control and architect.
Any changes will be the contractor/ client responsibility if not pre-approved by building control

**Drainage**
100mm dia uPVC foul and rainwater sewer pipes to BS 4660, laid to a fall between 1:40 and 1:50 with movement joints at 6m ctrs. Sewer pipes to be surrounded with 150mm pea gravel,covered with a 150mm concrete slab for width of trench.
Where cover to sewers in vehicular is less than 600mm then sewers to be wrapped in polythene and completely surrounded with 150mm concrete.
All sewer/waste pipes laid under solid floors to be wrapped in polythene before placing concrete.
Provide lintels over sewer/waste pipes where same pass through walls. Where sewer pipes are laid within 1 metre of foundations, then the trench to be filled with concrete to underside of foundation level.

Manhole covers to be to BS En 124

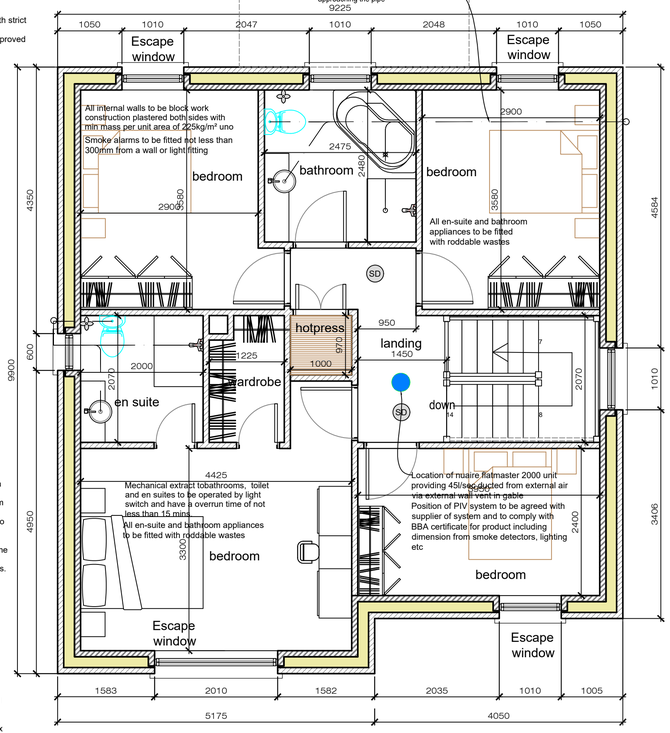
| | | |
|---|---|---|
| Group 1 | min A15 | Areas accessed by pedestrians or landscaped areas |
| Group 2 | min B12 | Footpaths, car parks and private drives |
| Group 4 | min D40 | Carriageways including pedestrian hard shoulders and parking areas |
| Group 6 | min F90 | Areas subject to high wheel loads. |

Concrete manholes to conform to BS 8301
Internal manhole sizes

| Depth to invert(mm) | Length and width(mm) |
|---|---|
| 610 | 610 x 460 |
| 610-915 | 740 x 570 |
| 915-1850 | 1000 x 660 |
| 1850-4550 | 1350 x 800 |

All manholes over 1200mm deep to be provided with step irons.
Last manhole to be within 12.0m of public sewer connection.
Installation of sealed rodding access eye (r.e.) to be in accordance with manufacturers instructions.
Foul gullies to be back inlet type with 100 diameter branch taken under-floor to position of appliance. Wastes to be not less in diameter than outlet with increase in size where necessary to prevent syphonage.
Rodding access to be provided to all wastes at any change in direction. Provide deep seal traps to all appliances inside building. Provide precast concrete surrounds to all gully traps. All 100mm dia. Upstands to be fitted with reducers to suit connecting pipe.

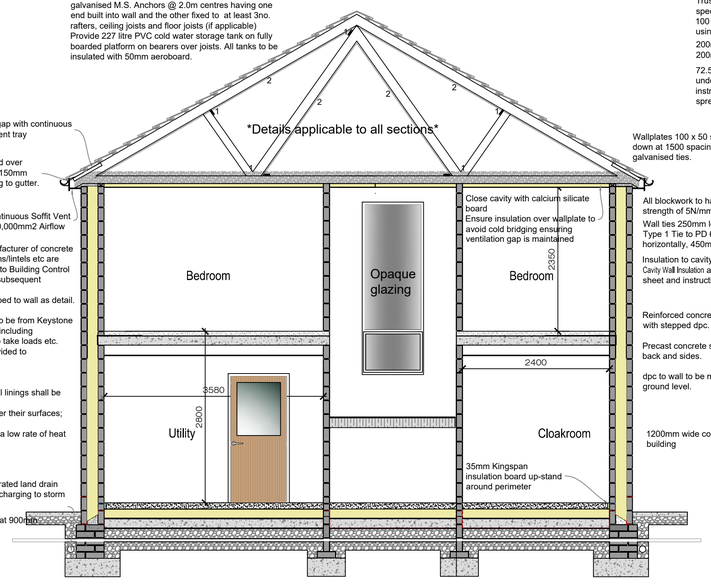
100 mm collector pipe to fall 1 in 40 in void between slabs and ceiling strapped to underside of slabs and all wastes to have suitable collars when approaching the pipe



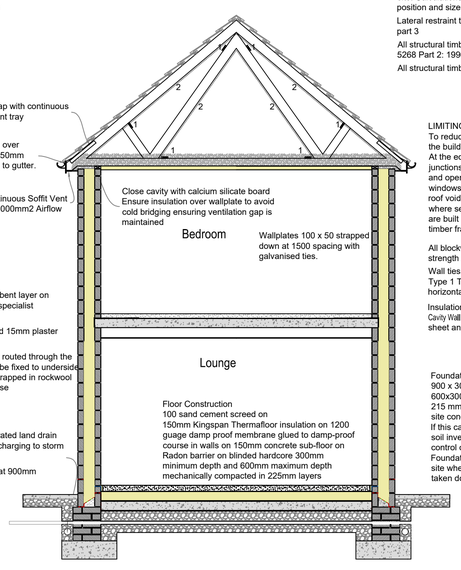

## First Floor Plan

74 sq metres or 797sq feet

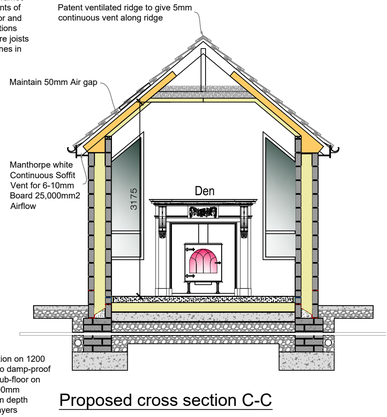
All blockwork to have minimum crushing strength of 5N/mm sq.
Wall ties 250mm long Ancon ST1 Wall Tie Type 1 Tie to PD 6697 - spacing 750mm horizontally, 450mm vertically
Insulation to cavity to be Ecobead Pumped Cavity Wall Insulation as per Manufacturers data sheet and instructions
Reinforced concrete lintels as per schedule with stepped dpc.
Precast concrete sills with dpc turned up back and sides.
dpc to wall to be minimum 150mm above ground level.
1200mm wide concrete path around building
100 mm diameter perforated land drain in pea gravel trench discharging to storm sewer
Vertical joints left open at 900mm spacing
Floor insulation
Floor Insulation to be Kingspan Thermafloor 150mm thick, with low emissivity composite foil facings on both sides. Insulation to be installed in strict accordance with Kingspan instructions. Floor construction to achieve a min. "U" value of 0.22 W/m2K




## Proposed cross section A-A




## Proposed cross section B-B




## Proposed cross section C-C

Trusses to be braced in accordance with B.S. 5268: Part 3 : 2006
1- 20x125mm longitudinal binders
2- 20x125mm chevron bracing
3- 20x125mm diagonal wind bracing
Roof truss design and calculations to be submitted to Building Control 14 days prior to erection of truss on site. Calculations to include a roof plan indicating position and size of all bracing, details of truss specials.
Lateral restraint to gable peaks to comply with BS5268 part 3
All structural timber to be C16 in accordance with B.S. 5268 Part 2: 1996 and to be clearly marked.
All structural timber to be marked dry.

LIMITING AIR INFILTRATION
To reduce the infiltration of cold air, leakage paths throughout the building shall be adequately sealed in the following locations: At the edges of openings such as windows and doors and at junctions with walls, floors and ceilings. Gaps between frames and openings and draught proofing the openable elements of windows, doors and rooflights. Hatches to unheated floor and roof voids. Service penetrations at floor and ceiling junctions where services are not boxed in. Around joist ends where joists are built into the external walls. Vapour control membranes in timber framed construction.

All blockwork to have minimum crushing strength of 5N/mm sq.
Wall ties 250mm long Ancon ST1 Wall Tie Type 1 Tie to PD 6697 - spacing 750mm horizontally, 450mm vertically
Insulation to cavity to be Ecobead Pumped Cavity Wall Insulation as per Manufacturers data sheet and instructions

Foundations
900 x 300mm concrete to all new cavity walls.
600x300mm concrete to new 100mm,150mm and 215 mm wide walls. Depth of foundation to suit site conditions, bearing as per Technical Booklet D. If this cannot be achieved an amended design and soil investigation report will be forwarded to building control on request.
Foundation width and depth to be determined on site when ground conditions are known, same to be taken down to firm load bearing strata.

Floor Construction
100 sand cement screed on
150mm Kingspan Thermafloor insulation on 1200 guage damp proof membrane glued to damp-proof course in walls on 150mm concrete sub-floor on Radon barrier on blinded hardcore 300mm minimum depth and 600mm maximum depth mechanically compacted in 225mm layers

Roof construction.
Blue/Black concrete tiles on 50x25mm pressure impregnated battens
Tyvek breathable roofing felt installed as per manufacturer's instructions.
Raised Tie Truss rafters @ 400cts manufactured by an approved firm to B.S.5268 : part 3 : 2006
Trusses to be erected in accordance with manufacturers specification No truss to be cut or altered on site
100 x 50mm treated timber wallplate strapped to inner leaf using 10mm galvanised straps @ 1.5m centres
100mm Kooltherm K107 Pitched Roof Board between rafters maintaining 50mm vent between insulation and felt with vapour barrier to warm side of insulation
200mm Knauf Loft Roll insulation laid between joists and 200mm Knauf Loft Roll insulation laid above joists
72.5 Kingspan Kooltherm K118 Insulated Plasterboard to underside of joists and rafters fixed as per product brochure instructions with bond and skim finish to achieve Class 1 spread of flame..

It shall be presumed that the Contractor has visited the site and the boundaries before tendering, inspected the form of tender and conditions of contract, drawings and specification and made himself thoroughly acquainted with the nature and requirements of the proposed works, and has examined the approaches and levels of the site and all the conditions under which he is to carry out the Contract. No extras through lack of knowledge of the site conditions will be entertained by the Architect.
All dimensions to be checked by contractor/fabricators prior to construction/fabrication of materials [floors, windows, doors, drainage etc].
Contractors shall comply with CDM regulations and Health and Safety legislation.
All works shall be carried out in accordance with accredited construction details (DCLG publication)

An air permeability rate of 8m3/(h.m2) @ 50Pa or less must be achieved by test on completion of the dwelling if required by the Building Control Authority.
All fixed services shall be properly commissioned and signed by a suitably qualified person and a copy given to the building owner and District Council.
The building owner shall be given sufficient information on specific apparatus/systems installed, including operational and maintenance instructions, to enable the dwelling and its fixed services to be used in an energy efficient manner.
An energy rating for the completed dwelling will be calculated using the same software that is used to calculate the DER and TER and a notice stating this rating will be fixed in the dwelling.
On completion, Contractor to ensure that everything is left clean, tidy, watertight and structurally sound, to employer's entire satisfaction. All materials and workmanship to be in accordance with all relevant British Standards, codes of practice and Building Regulations NI 1990, with amendments.
CAVITY WALLS
375mm concrete block cavity walls, 100mm inner and 100mm outer leafs with100mm wide cavity using
**300mm long Ancon ST1 Type 1 Tie (or equal approved)** wall ties at 600mm ctrs. Horizontally and 450mm ctrs. Vertically in offset pattern wall ties spaced 225mm ctrs. "in-line" at all window and door openings and construction joints, etc. Cavity fill shall be 1:3 cement/sand to within 225mm below d.p.c. Level. All cavities shall be closed along gable ends. All concrete blockwork where specified shall be 7kn/mm sq. (or as specified by Structural Engineer). Concrete blocks shall be to BS5628 with class iii mortar, i.e. 1:3 cement/sand with plasticizer. Rate of construction shall not exceed 1.5m height per day. Allow for forming openings in blockwork/stonework to receive exterior meter box, extract fans and duct from tumble drier etc.. Joining of new blockwork/brickwork to existing by means of forming pockets in existing walling. Alternatively by means of specialist galvanised steel profiled fixed to existing wall with adjustable wall ties built into new brick/block coursing.
FLOORS GROUND
Floors shall be 100mm C35/20 cement/sand screed on 150mm thick Kingspan, on 1200G DPM continuous with DPC in walls on 150mm 1:2:4 concrete sub-floor on radon barrier on 225mm blinded hardcore. Hardcore consisting of clean broken stone shall be mechanically consolidated in 225mm layers to a depth not exceeding 600mm. Laps in DPM shall be not less than
300mm.
FLOOR INSULATION
Solid concrete ground floor - Floor Insulation to be Kingspan 150mm thick, with low emissivity composite foil facings on both sides. Insulation to be installed in strict accordance with Kingspan instructions. Floor construction to achieve a min. "U" value of 0.22 W/m2K

TIMBER
All timberwork to be carried out in accordance with BS 5268
All timber used to be structural class C16 (sc3) or C24 (sc4) as specified on plans and shall be stamped accordingly when delivered to site.
Architecturally exposed timbers shall not be visibly stamped but must be similarly stress graded and supplied with an accompanying stress grade certificate from the suppliers.
All timber to be used must be kiln dried and must be stored under sheltered dry conditions such that moisture content does not exceed 18% at any stage during supply, storage or erection (7% for truss members)
All structural timber to be pressure impregnated Steel connector bolts shall be grade 4.6 black bolts (diameter as specified)
Tooth plate connectors shall be 50mm round or square galvanized steel and shall be fully embedded in the timber members by pre-compression and rebating where necessary. Principal nailed connections shall be formed using a minimum of 4 no 3.75mm diameter round wire nails.
INTERNAL PLASTERING
Internal block walls, sand/cement render and skim finish. Ensure that plastering is stopped short of finished floor screen by 25mm. Use aluminium angles to all internal exposed corners. Internal walls to garage where shown, smooth sand/ cement wood float finish.

CEILINGS
Unless otherwise stated provide 12.5mm plasterboard to all ceilings with 6mm bonding and skim finish.
Where the ceiling finish [e.g. Plasterboard] is fixed directly to the underside of rafters in a pitched roof a vapour barrier should be inserted to the warm side of the roof insulation before fixing the finish.

LATERAL RESTRAINT
Where rafters, ceiling joists, floor joists and trusses are parallel to masonry walls they shall be restrained thereto with 30x5mm thick M.S. galvanized straps at not exceeding 1500mm crs The restraint straps shall be restrained to at least 3 No timbers with No 8 screws with solid bridging / packing between timber and wall spiked in position. For concrete floors provide 30x5mm thick M.S. galvanized lateral restraint straps @ n/e 1500 crs built tightly into wall (turned down) and screwed and plugged to tops of slabs with 4 no M6 screws

RADON
Lay a continuous Visqueen radon proof membrane/barrier [300myl] across the whole of the ground floor [including floor, walls and cavity].
All joints in membrane/barrier to be in strict accordance with manufacturers instructions and to have a minimum lap of 150mm and be bonded using radon-proof butyl jointing tape.
Where pipes pass through membrane/barrier they are to be sealed using radon propriety pipe seal.

DAMP PROOF COURSE
At the base of walls or pier's [except retaining walls], D.P.C. To outer leaf to be 150 min above finished ground level. DPC in walls shall be continuous with DPM in floor
Under all copings and chimney caps.
Behind and to ends of all cills.
Through all chimneys in lead.
At jambs, and heads of openings and elsewhere where cavity is bridged. All horizontal D.P.C.'S to be stepped outwards so as to discharge moisture externally.
At all abutments of roofs with walls in the form of patent cavity trays stepped to follow roof and discharge moisture externally.
Provide stepped DPC to all lintels over all doors & windows.
FOUNDATION CONCRETE
All concrete works to be carried out in accordance with bs8110. Grade c25 Newton at 28 days. Minimum cement content 330kg/m maximum aggregate size 20mm. All structural concrete to be thoroughly vibrated. All concrete work to be carried out in accordance with cp110:1972.
Mudmat: 75mm C7 Newton. Concrete cover to reinforcement shall be 75mm unless stated otherwise. All concrete delivered to site to be within 50-5 slump range unless otherwise agreed. No water to be added to concrete after its arrival on site unless by agreement. All concrete curing procedures to be carried out below a steady shade temp. of 3deg.C or 5deg.C and falling. Max. Assumed ground bearing pressure of 100kn/msq. The builder shall notify the local building control (in normal procedure) of foundations being ready for inspection. Min. Overlap to steel mesh (where indicated) to be 450mm throughout. Day joints between adjacent discontinuous concrete foundation pours shall be reinforced to 1200mm on each side of the joint with B503 steel mesh top and bottom. The concrete is to be given min. 14 days to set before building commences. Building is to be evenly distributed across the foundations during construction.
DAMP PROOF COURSE
At the base of walls or pier's [except retaining walls], D.P.C. To outer leaf to be 150 min above finished ground level. DPC in walls shall be continuous with DPM in floor
Under all copings and chimney caps.
Behind and to ends of all cills.
Through all chimneys in lead.
At jambs, and heads of openings and elsewhere where cavity is bridged. All horizontal D.P.C.'S to be stepped outwards so as to discharge moisture externally.
At all abutments of roofs with walls in the form of patent cavity trays stepped to follow roof and discharge moisture externally.
Provide stepped DPC to all lintels over all doors & windows.
TRICKLE VENTILATORS
All new windows to be fitted with trickle ventilation having an area of 8000mm sq. to all rooms
RAPID VENTILATION
All habitable rooms, kitchens, bathrooms & sanitary accommodation to have ventilation openings equivalent to not less than1/20th of floor area

WINDOW CILLS
Unless otherwise specified to be pre-cast concrete, 100mm face depth with 2 no. 10mm bars reinforcing for handling bedded on DPC.
TRAP DOOR
Provide Glidevale LA1 trap door where indicated on plan. Fully insulated hatch with rigid insulation providing U-value of 0.35 W/m2/K. 520 x 680 hatch opening, 555 x 717 structural ope. required.

TIMBER
All structural timber unless otherwise stated on drawings or Structural Engineers details to be Class C16 to B.S 5268 pt.3 1998 and shall be clearly stamped "Dry" or "K.D" (kiln dried) together with stress grading. Trimmers to chimneys etc. to be 75 thick by depth of joist, supported on patent galvanised hangers.

EXTERNAL JOINERY
200 x 19 swish type PVC fascia on timber backing. 200 x 14 soffit in PVC.
External doors to have minimum clear opening width of 950mm

INTERNAL JOINERY
150 x 19 square edged beech skirting
100 x 14 square edged beech architrave.
50 x 14 square edged beech door stop.
150 x 25 beech window board.
Provide 750 x 750 trapdoor to roof void

INTERNAL DOORS
Doors to B.S 1942(B) supplied in flush beech effect as client requirements ( p.c. sum supply £70.00) Furniture to be regency design in brass. Doors to have clear opening width of 900mm

SPACE HEATING IS PROVIDED BY RADIATORS – NOT UNDERFLOOR HEATING

Dwelling constructed to DCLG published "Accredited Construction details for Part F

| | |
|---|---|
| Internal energy efficient fixed lighting – minimum 75% | Three per four light fittings. |
| HWC capacity | 210 Litres |
| HWC Factory insulated jacket | 100mm thick |
| Oil boiler to have SEDBUK efficiency rating of | 97 % |
| Full Zone Control to Space Heating and HWC and delayed start thermostat and weather compensatory control | Full Zone control |
| Windows uPVC insulated frame with 4argon filled glazing units 4mm triple glazed low iron & low-e, | Soft Coat Low E (en= 0.05) (U-Value of 1.3W/m2K) |
| Design Air Permeability to be not more than | 3.5m3 /(h.m2) @ 50Pa |
| Wire type wall ties to be used in cavity wall | Wire type |
| Inner leaf of cavity wall to be 5N/mm2 block work with a density of | 2000kg/m3 |
| Block Cavity Wall insulation has the thermal conductivity of not greater than 0.023 W/m k (e.g. Ecobead Pumped Cavity Wall Insulation) | 175mm thick |
| Floor insulation has the thermal conductivity of not greater than 0.023 W/m k (e.g. 150mm Kingspan) | 150mm thick |
| Insulation to jamb/head/cill is to have a minimum thermal resistance path through the cavity closure of not less than 0.45m2K/W. | 20mm thick polystyrene – dense block with cement render.(R-value = 0.57 m2K/W) |
| Insulation between upper corner of wallplate and sarking board has a minimum R-value across the thickness of the insulation of not less than 1.2 m2.k/W | 65mm thick fibre glass. (R-value of 1.63 m2.k/W) |
| Insulation to vertical edge of floor screed has a minimum R-value of not less than 0.75 m2K/W through the depth of screed. The insulation has a thermal conductivity of not more than 0.023W/mk (e.g. 30mm Kingspan) | 35mm thick Kingspan (R-value = 0.87 m2K/W) |

| Rev | Date | Description |
|---|---|---|

**ALL DIMENSIONS TO BE CHECKED ON SITE.**
**DO NOT SCALE, USE WRITTEN DIMENSIONS ONLY**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Client
Jones Construction Ltd.
80 Derrygonnelly Road, Ratona, Enniskillen

Project Title
Housing Development at
Marble Arch Road, Drumlaghy,
Florencecourt, Co. Fermanagh

Drawing Title
Dwelling Details
Site 2 and 4

Drawing Status : PRELIMINARY

| Scale | Date | Drawing No. | Rev. |
|---|---|---|---|
| 1/50 | Aug 2022 | JJ/FL/102 | . |