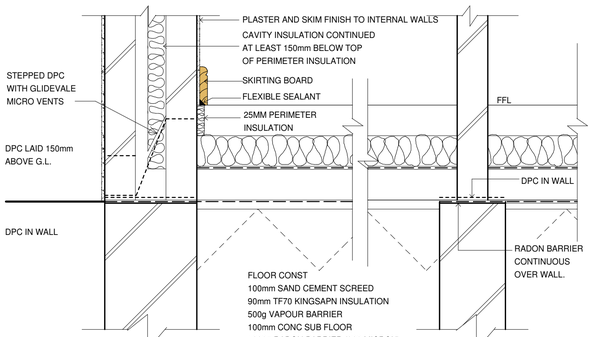
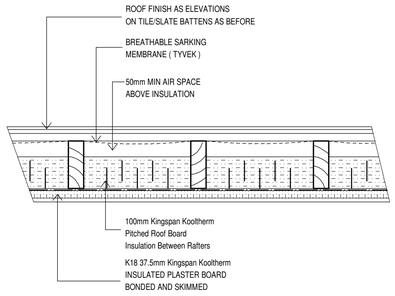


TRADITIONAL FLOOR CONSTRUCTION

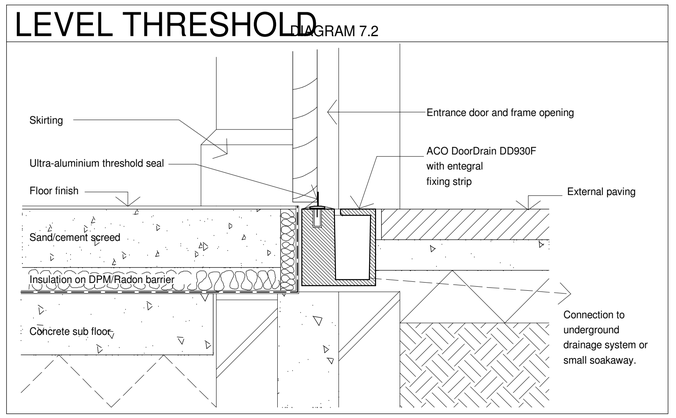
SCALE 1: 10

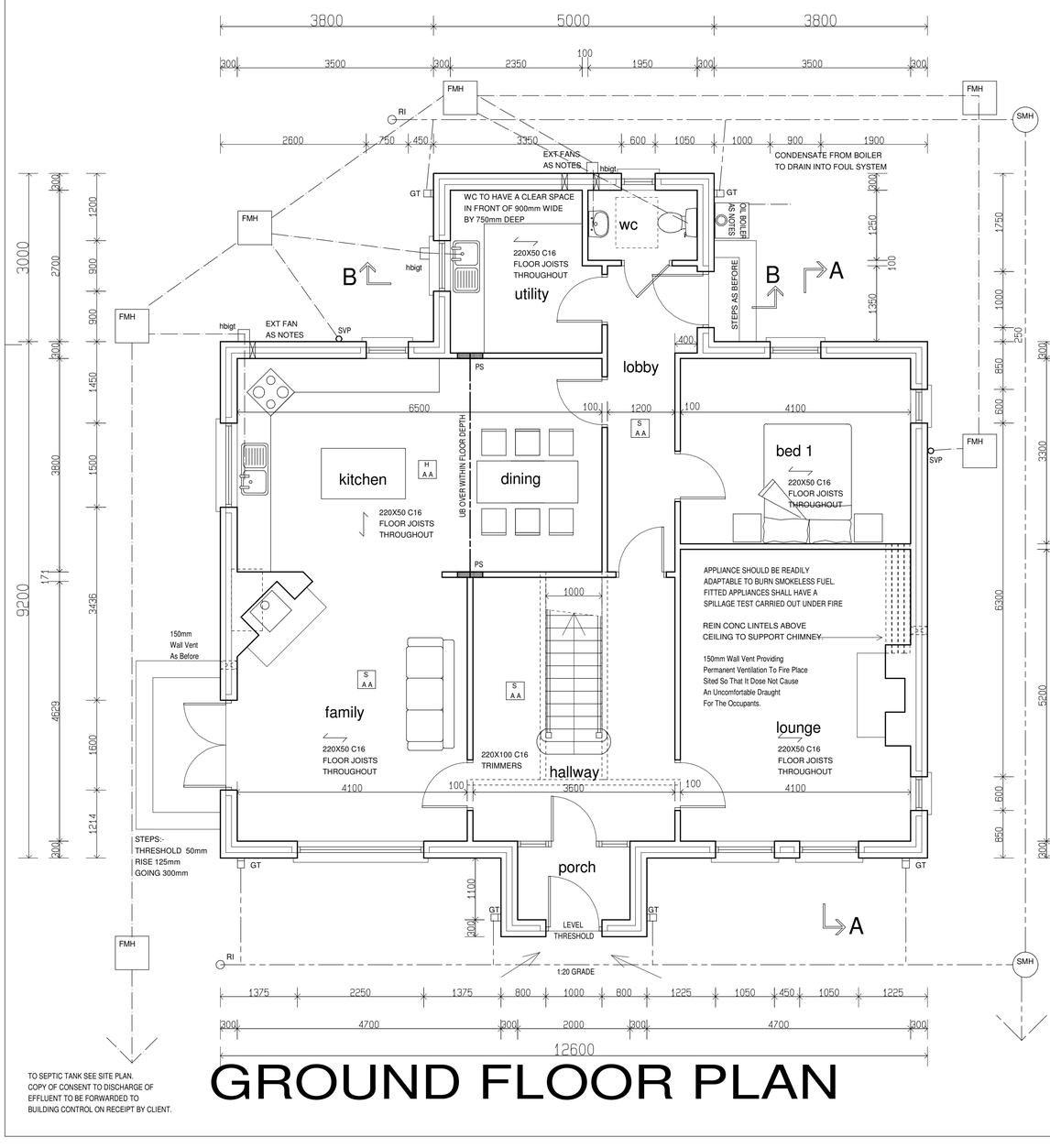
(It is vitally important to ensure the radon barrier is not punctured.)
(Standard of insulation to be as detailed on plans)



COVED CEILING

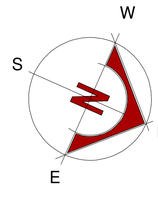
LEVEL THRESHOLD DIAGRAM 7.2

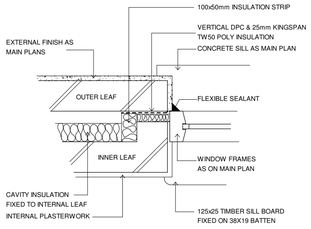




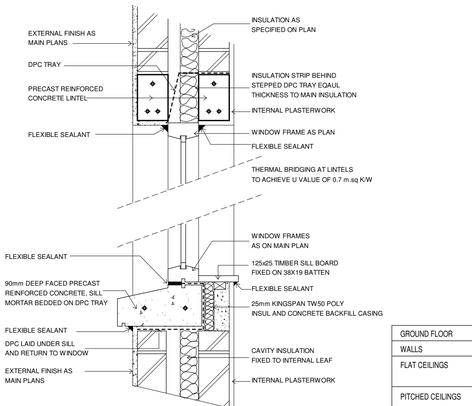
TO SEPTIC TANK SEE SITE PLAN.
COPY OF CONSENT TO DISCHARGE OF EFFLUENT TO BE FORWARDED TO BUILDING CONTROL ON RECEIPT BY CLIENT.

GROUND FLOOR PLAN



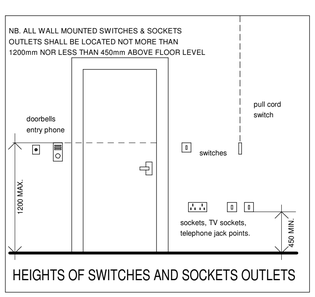


REVEAL 1:10



HEAD AND SILL 1:10

GROUND FLOOR	90mm TF70 KINGSPAN INSULATION
WALLS	60mm TW50 KINGSPAN INSULATION
FLAT CEILINGS	200MM GLASSFIBRE INSUL BETWEEN JOISTS 100MM GLASSFIBRE INSUL OVER JOISTS
PITCHED CEILINGS	100mm Kingspan Kooltherm INSULATION BETWEEN 35mm Kingspan Kooltherm UNDER RAFTERS
WINDOWS & DOOR	DG PVC ARGON LOW E GLASS
EXTERNAL DOOR	SOLID WOOD
TRAPDOOR	90mm TF70 KINGSPAN INSULATION
PRIMARY HEATING	CONDENSING OIL BOILER = 93% EFFICIENCY
SECONDRY HEATING	OPEN FIRE IN GRATE - HETAS APPROVED (DUAL FUEL - MINERAL/WOOD)
DOMESTIC WATER	PRIMARY HEATING SYSTEM - 145 LITRE CLY 50mm FACTORY INSULATED
PRESSURISATION TEST q50 DESIGN VALUE - 10.00 NATURAL VENTILATOIN WITHINTERMATTENT EXTRACT FANS LOW ENERGY LIGHTING: 30% OF FIXED LIGHTING POINTS	



HEIGHTS OF SWITCHES AND SOCKETS OUTLETS

CENTRAL HEATING AND HOT WATER SYSTEMS TO BE DESIGNED, INSTALLED AND COMMISSIONED FOR THE PURPOSES OF CONSERVATION OF FUEL AND POWER AND HANDED OVER IN EFFICIENT WORKING ORDER

CENTRAL HEATING AND HOT WATER SYSTEMS TO BE COMMISSIONED IN ACCORDANCE WITH THE PROCEDURE GIVEN IN THE DCLG PUBLICATION "DOMESTIC HEATING COMPLIANCE GUIDE"

A NOTICE CONFIRMING THAT ALL FIXED SERVICES HAVE BEEN PROPERLY COMMISSIONED SHALL BE PROVIDED, SIGNED BY A SUITABLY QUALIFIED PERSON AND A COPY GIVEN TO THE BUILDING OWNER AND DISTRICT COUNCIL.

BUILDING OWNER TO BE GIVEN SUFFICIENT INFORMATION OF 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 DWELLING WILL BE CALCULATED, USING THE SAME SOFTWARE THAT IS USED TO CALCULATE THE DER & TER. AND A NOTICE STATING THE ENERGY RATING WILL BE FIXED IN THE DWELLING

NOTE:
FOR THE CONTRACTOR OR THOSE RESPONSIBLE FOR THE CONSTRUCTION OF THIS BUILDING.
This building is to comply with the newly amended Building Regulations PART F1, F2, H, L & R NOVEMBER 2006.
Therefore the contractor should familiarize him/her self with these regulations and ALL 'ACCREDITED DETAILS'.
All insulation, heat appliances, duct sleeves, draught proofing etc specified on this drawing and others issued for the purposes of constructing this dwelling have all been used to achieve an energy rating which conforms with the new regulations. Therefore any changes to these components on-site will affect this energy rating and could cause the building to FAIL ON-SITE which could result in FAILURE TO OBTAIN BUILDING CONTROL APPROVAL

Foundations
The foundations have been designed to be adequate if the bearing is on subsoil Type III or better as defined in Section 5 Table 5:1 of Technical Booklet D of Building Regulations. Foundations shall be situated centrally under walls. Where foundations require to be stepped they shall overlap by twice the height of the step or the thickness of the foundation or 300mm whichever is greater.
Steps shall not be of greater height than the thickness of the foundation.
600x250mm conc. strip foundations shall be used for 300mm cavity walls.
550x200mm conc. strip foundations shall be used for 215mm solid walls.
450x200mm conc. strip foundations shall be used for 100,150 solid walls.
Provide 1No. layer A393 mesh to bottom of all strip foundations.
Foundations should be a min of 750mm deep taken down to a firm bearing strata.
If a suitable bearing cannot be achieved then an amended design will be submitted To the local authority as necessary.

Hardcore
The hardcore shall be a min of 150mm deep at the highest point of infill to a max of 600mm. Hardcore should be consolidated in 225mm max layers with a mechanical vibrator. If hardcore exceeds 600mmdeep, then precast or prestressed concrete T-Beams or similar slabs shall be used in accordance with manufacturers details and these shall be submitted to Building Control 3 weeks prior to erection on site.

Ground Floor Construction
AS DETAIL

Radon (primary)
Provide preformed radon cavity barrier and continuous floor membrane 1200gauge(300micron). If a Monarflex radon membrane or similar is used this should be laid strictly in accordance with manufacturers instructions. Where service pipes penetrate the membrane these should be sleeved using appropriate pipe collars, stainless steel adjustable clips and sealing tape. (secondary)
In Zone 2 level areas a radon sump with multiple pipe inlets should be provided for every 250m2 of floor area. Under floor supporting walls should incorporate ventilation openings 225x150mm at 1800mm crs to allow cross ventilation to clean hardcore fill. An outlet pipe 100mm dia shall be taken from the preformed sump & vented to the outside air & terminate 1000m above the head of the highest window.

Brick/Block Cavity Walls.
Cavity walls shall be 300mm thick overall with a 100mm cavity. Wall ties shall be stainless steel suitable for 100mm cavity with p.v.c. retainer disc for insulation.
Ties shall be positioned at 750mm centres horizontally and 450mm centres vertically and staggered. Additional ties should be provided at reveal at 215mm centres vertically.
Butterfly wire stainless steel wall ties should be used in separating walls at centres as before. Cavities and wall ties should be kept clean of mortar droppings. Provide patented expansion joints horizontally every 6m in facing brick and 8m in blockwork. Weep holes should also be provided in vertical perpends of facing brick heads as necessary.
D.P.C.'s should overlap and be bonded to dpm and be a min of 150mm above finished ground levels.

Lintols
Prestressed or R.C. lintols should be used in openings up to 2.500m in accordance with concrete manufacture's specifications. Keystone SK/90 lintols should be used over openings greater than 2.500m to the max. span and loadings recommended by the manufacture's and have 225mm end bearing. Where P.C. floor slabs are used the lintols should be in accordance with the structural engineers calcs./recommendations.

First Floor Construction
18mm t & g flooring grade plywood on joists to sizes indicated on layout plan at 400mm centres with herringbone bridging at 2.400m centres. Provide double joists under stud walls that run parallel to direction of joists and bridging to those at right angles.
Trimming and trimmer joists to stairwell and chimney stack to be 75mm thick x depth of joist unless otherwise stated on plan. Ground floor ceilings should be finished using 12.5mm plasterboard bonding and skim . Internal Stud Walls To have 100 x 50mm head and sole plates with 100 x 38mm s.w. vertical studs at 400mm centres vertically with horizontal solid budging at 1.2m centres. Walls to be insulated with 100mm rockwool or similar sound insulation where necessary and sheeted either side with 9.5mm plasterboard bonded and skin. Structural studs to be faced with 18mm grade ply to one face and bolted to blockwork with M8 Bolts at 450mm max centres. Walls to shower and other areas to be tiled to receive either moisture resistant plasterboard or 18mm external grade plywood faced with building paper, expanded mental lath and sand/cement.

Lateral Restraint
Provide 1.5m x 32 x 6mm galvanised m.s. lateral restraint straps to first floor,ceiling and roof levels. Straps to be at 2.00m centres, built into wall and extend over 3 no. joists /rafters with bridging under. Straps should be screwfixed to joists/rafters. (see detail)

Pitched Roof Construction
Roof covering as indicated on elevations on 38 x 25mm s.w. pressure impregnated battens on Tyvec or similar breathable underlay.

Roof trusses to be at 400mm centres designed and braced to BS 5268 part 3. Horizontal, diagonal and web bracing to be 100 x 25mm to locations indicated on sections and elevations. Double trusses to be used to trimming tropdoor and chimney openings in accordance with manufacturer's details. Details of trusses as necessary to be forwarded to Building Control 14 days prior to erection on site. All structural timbers shall be pressure impregnated/kiln dried. Ceilings at roof level should be finished with 9.5mm plasterboard bonding and skim.

Traditional Cut roof
(see details on section(s) / roof plan).

Dormer Roof
Provide roof covering as indicated on elevations on 38x25mm s.w. pressure impregnated battens on Tyvec or similar breathereable underlay on 100 x 50mm rafters and ceiling joists at 400mm crs. supported on 100 x 50mm head and sole plates with 100x38mm vertical studs at 400mm crs. Provide double/triple rafters to supporting stud walls of dormers. Finish the dormer as indicated on elevations on galvanised expanded metal lath on breather felt on 18mm external grade ply. Dormer walls to be insulated using 100mm thick Kingspan Thermapitch TP10 between vertical studs and 25mm Thermawall TW56 to internal face, 500 guage vapour barrier and 9.5mm plasterboard bonding and skim.

Valley Construction
Provide stepped trusses at 400mm centres fixed to 200x38mm lay boards. Lay 225x25mm valley boards with no. 4 lead flashing, breather felt to valley.

Cut roof valley rafters and timbers to be in accordance with Section(s).

All structural timbers shall be C16 or C24 grade if indicated and kiln dried.
Timbers shall be clearly stamped and marked accordingly.

Means of Escape
Emergency Egress Windows shall be provided to every habitable room on the 1st or 2nd floor storey levels. Windows shall have a clear opening at least 740mmx450mm and be positioned as indicated on elevations. Dwelling with 3 storeys shall have a protected stairway fitted with 20minute fire resistant self closing doors.

Smoke alarms should comply with BS 5446-1:2000 and Heat alarms to BS5446 – 2:2003 in locations indicated. Smoke alarms should be located no more than 3.00m from every bedroom door and not more than 7.5m from every door to a living room or kitchen. heat alarms to be within 5.3m of all parts of kitchen. Smoke and Heat alarms shall be permanently wired to regularly used lighting circuit or a separate circuit which only serves the Smoke and Heat alarms. Ceiling mounted smoke alarms should be sited not less than 300mm from the wall or light fitting.
Smoke and heat alarms to be interconnected.

Smoke and Heat Alarms for Dwelling House more than 200 sq.m on each floor and not more than three storey.

Provide an automatic detection system complying with BS5839:6:2004-Grade B Cat. LD2:
* wiring should be fire resistant
* cables should give sufficient resistance to the effects of fire.
* fire resistant cables should be clipped to face of joists /ceiling members with fire resistant clips.
On completion of the installation and commissioning a certificate confirming compliance is required.
Fire stopping at roof level and separating walls see details.

Space Heating and Hot Water System
Oil Boiler
Oil fired condensing boiler to be a Grant Vortex or similar having a minimum efficiency of 93% or min energy efficiency as detailed on the energy performance calculations. (SAP rate.) Condensing boiler to be as located on plan. The flue to be impervious to condensates and resistant to corrosion.125mm flue made from 0.8mm thick stainless steel. The appliance should be fitted with a condensate trap and be piped to the external gully as indicated on plan. Where a boiler is fitted in ternally a fire valve to BS5410.1:1997 shall be fitted externally on the fuel supply.

Space Heating
Boiler should be fitted with boiler control interlock and space heating divided into two heating zones using room thermostats or programmable room thermostats in all zones, one of which should be the Living Room. Time control of space and water heating should be provided using a full programmer and separate timing to each circuit.

Dwelling over 150m2 will require a multiple heating zone programmer. Hot water cylinder shall be (145 litre) thermally insulated tank with factory applied coating of polyurethane foam 50mm thick. Hot water cylinder to be fitted with thermostat connected to the programmer. All hot water service pipes including those connecting the H.W.C. shall be insulated as follows: pipe dia 8mm-10mm use 13mm Armaflex.
Pipe dia 12mm - 15mm use 19mm Armaflex.
Pipe dia 22mm-28 with 25mm Armaflex.
Pipe dia 35mm - 54mm use 32mm Armaflex.

Cold water storage tank to be fitted with a suitable cover and having a 100mm thick glass fibre fitted insulating wrapping.

Space heating and hot water systems shall be designed, installed and commissioned for the purposes of conservations of fule & power in accordance with the manufacturer's instructions and handed over in efficient working manner. The installer shall give a full explanation of the systems and its associated equipment and its operation to the user, including manufacturer's User Manuals. The installer shall also provide a Notice confirming that all the fixed building services have been commissioned and provide a copy to the building owner and the District Council. The Notice shall be signed by a suitably qualified person.

Fixed Internal Lighting
Energy efficient light fitting shall be installed in the most frequent area in the dwelling and there shall be not less than
(i) one per 25m2 of dwelling floor area (excluding garage) or
(ii) one per four light fittings. (Which ever the greater.)
Fixed External Lighting
Shall have a maximum output of 150w per fitting and automatic switch off
(i) when there is adequate daylight and
(ii) when not required at night.

Insulation
Insulation of walls, floor and roof to be as indicated on Plan, Section and S.A.P. calculations. S.A.P. calculations to be taken in preference to any variances on drawings.

Safety glazing to satisfy the test requirements of BS8206 Class C shall be used in the following locations and marked with an asterisk: Below 800mm from ground and finished floor levels to windows Below 1500 mm from ground and finished floor levels to doors and side lights within 300mm of a door. Where glazing to doors or side lights exceed 900mm it shall satisfy the test requirements of BS8206 Class B.

Air Permeability and Pressure Testing

Provide suitable means of reducing air infiltration of cold air by sealing gaps between dry lining and masonry walls at edge of openings such as windows and doors and at junctions with walls, floors and ceilings. Sealing gaps between frames and openings and draft proofing the opening sash of the window, roofights and doors. Seal hatches to unheated floor and roof voids, seal service penetrations at floor and ceiling levels. Ensure vapour control members are sealed in a timber frame construction.

Dwelling will be built using accredited construction details provided. Contractor must ensure dwelling is built to these preferred details and signed off on completion of works. A Notice of Confirmation of details used and signed off shall be given to Building Control on completion.

The design Dwelling Carbon Emission Rate (DER) has been based using an air permeability rate of 10m3/m2 @ 50 Pa, and the Contractor will on completion using the same software used for the design DER show that it is still equal or less than the TER.

An energy rating shall be calculated on completion of the dwelling as built and a notice stating the energy rating fixed in the dwelling (meter cupboard) and a copy given to Building Control.

Separation Walls (sound)
Cavity separating walls should have a mass including plaster of 415kg/m2. Butterfly wire wall ties should be used in separation walls at 750mm centres horizontally and 450mm centres vertically and staggered. Walls should be kept free of electric sockets and switches or other recesses to eliminate sound. Depth of horizontal chase shall not exceed one sixth of the leaf and vertical chase shall not exceed one- third of the thickness of the leaf. Chases on recess back to back are not permitted. Cavity should be kept free of insulation.

Floor joists should not be built into the separating wall. Heavy duty joist hangers should be used for any joists supported by the wall.

Stairs
Min unobstructed width for flight should be 800mm. Rise and Going to sizes as indicated on plans. Handrails should be 900mm above pitch line of stair with vertical balustrading at 99mm centres. Balustrade within dwelling should be a minimum of 900mm high. Handrails should be provided to both sides of stair which exceeds 1.000m in width. Headroom shall be 2.00m min over full width of stair.

Ventilation (mechanical, background & rapid)
Ceiling and wall mounted extract fans shown to have the following min specification. Extractor fans in kitchen & utility should be capable of extracting at least 30litres of air/sec. Fans in bathrooms, shower rooms & en-suites should be capable of extracting at least 15litres of air/sec and have a 15min overrun. Extract fans in windowless accommodation to have the above extraction rates together with a 15 minute overrun and a permanently open air inlet having a minimum free air opening of 9000mm2.

All habitable rooms to have trickle ventilation of 8000 mm2. Kitchen, utility, bathroom, W.C. or en suite to have trickle ventilation of 4000mm2. Patio/French doors to have trickle ventilation of 8000mm2 fitted in the top frame. Habitable room, kitchen, utility room, bathroom and sanitary accommodation shall have rapid ventilation of 1/20 of the floor area.

Fireplace/Flue
Fireplace with an opening of 450mm should have a permanent air supply of 18500m2 for openings greater than this reference should be made to Technical Booklet L. Table 2:1. Permanent open air vent for an open flued oil fired appliance in a room should be at least 550mm2 per kw output for other location or room sealed appliance refer to Technical Booklet L.

Flue liners to fireplace openings up to 500mm x 550mm shall be 200 mm diameter. Fireclay to rebated bonded together with fire cement to comply with Class A to EN 1457-1999. For fire openings sizes greater than this refer to Technical Booklet L para.2.7. When the flue is required to be dragged then the angle of diagonal shall not exceed 45o to the vertical. The head of the fire opening shall have a precast conc. throated lintol.

The fluepipe to the oil boiler shall be the same size as the appropriate outlet unless the appliances manufacturer specifies otherwise. If the flue outlet is located where a person could easily come into contact with it or be damaged it shall be protected with a suitable guarding.

Constructional Hearth to fire place and oil fired boiler should be a minimum of 125mm thick to size indicated on plan.

Flue for fire opening shall be checked on completion to ensure that it is free from obstruction and gas-tight and constructed with material suitable for the intended application.

If a combustion appliance is fitted a spillage test shall be carried out with the appliance under fire. All proposed combustion appliances to be capable of burning or adapted to burn smokeless fuels

The Contractor will be responsible for provision of a robust indelibly marked Notice plate for hearth and flues fixed in meter cupd. or next to the hearth to convey.

(i) Location of hearth
(ii) The type of combustion appliance that can be used
(iii) Type and size of the flue and manufacturer's name
(iv) Who installed the hearth, fireplace, flues or chimney and date of installation.

Oil Storage Tank and Pollution

The oil should be stored in an integrally bunded prefabricated tank with a capacity of not less than 110% of the tank and placed on a concrete base which extends 300mm beyond the external skin of the tank. A fire wall shall also be provided if placed within 750mm of a boundary or within 1800mm of a building. The fire wall should be built in block/brick to give 30mins fire resistance and extend 300 mm above and beyond each side of the tank.

Automatic Isolation Valve : The fuel pipework should be resistant to the effects of fire and fitted with a fire valve where it enters the building in accordance with BS 5440 Part 1:1997.

Drainage
The pipes shall be 110mm dia. UPVC to BS 4660 laid to 1: 40 fall as indicated on plan Pipes shall be laid in pea gravel filled trenches and have a min cover of 450mm. Where pipes passed under concrete floors or within 1m of foundations they shall be wrap ped in polythene and encased in 150mm concrete with expansion joints at 5.0m centres. Provide conc. lintols over drainage pipes that pass through walls. Manholes to be UPVC to positions indicated on plans with covers to comply in the following locations.

Pedestrian/landscape areas	Type A15
Cars/footpaths/private drives	B125
Public roads/parking areas	D400
Areas subject to high wheel loads	D900

Manholes on each private foul and storm drain to be within 12m of connection to public system.

Septic Tank: See site plan for location and specification details.

SVP/WASTES
Vent and Soil vent pipes to terminate as shown on elevations at least 1m above any window or within 3m measured horizontally and fitted with pvc cowl. Soil vent pipes encased in ducts should be insulated with rockwool and finished with 12.5mm plasterboard bonding & skim. Waste pipes connecting to soil vent stack shall be as follows: from W.C. 110mm dia. within 6m, wash hand basin 32mm within 1.7m, and from bath, shower & sink wastes 40mm within 3m and 50 mm within 4m. For longer distances pipe sizes should be increased as appropriate. Branch pipes shall enter the stack at least 200mm below a W.C. connection. Suitable access for rodding should be used at all changes in direction.

Access to and into a Dwelling
Where the drive way provides a whole or part of the approach it shall not exceed a gradient of 1:20. Where the point of entry is at the boundary it shall have an unobstructed width of not less than 900mm. The approach surface shall be firm and even and the cross fall shall not exceed 1:40. Ramps should have gradients as follows: Length 10m – Gradient 1:15, Length 5m Gradient 1:12 with landings not less than 1200mm. Stepped approach should have a rise of not more than 1800mm in each flight with uniform steps having a rise of not less than 75mm and more than 150mm and the uniform going of not less than 280mm. Handrails shall be fitted at a height of 900mm above the pitch line and 1m above the surface of a landing and extend not less than 300mm horizontally beyond the top and bottom nosing.
Principal entrance door shall have a minimum clear opening width of not less than 775mm and a maximum threshold of 15mm.
All internal doors to the principal storey shall be a minimum width of 750mm to 1200mm circulation routes and 800mm to 900mm circulation routes.
For location of mounted switches and sockets see switch/socket outlet detail.

Rev.	Description	Date

PRELIMINARY

DRAWING TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERS DETAILS/ DRAWINGS & BUILDING CONTROL APPROVED DRAWINGS

Client
MR FRED McDOWELL

Project
PROPOSED DWELLING
AT CRIEVE
FIVEMILETOWN
CO. FERMANAGH

Drawing title
GROUND FLOOR PLAN

ACA
PLANNING - URBAN DESIGN - ARCHITECTURE
Tel. 028 8224 2808 Fax. 028 8224 0426
E-Mail. mail@acaarchitecture.co.uk Web. www.acaarchitecture.co.uk
Design Studio 17 Mullaghmena Pk, Omagh. BT78 5PW

scale	1:50	drawn	SON
date	03.12	checked	AC
project	1-00	sheet	01