

Manholes to sizes and locations as indicated. Manholes in grassed areas and paths to be provided with M.S. galvanised covers and frames. Provide heavy duty ductile iron covers to all manholes in driveways and roads. Manholes to be built with 215mm engineering brick class B. and pointed in 1:3 C.M. 150mm deep class 22.5/40 concrete base. Sand/cement benching to sewer pipe. Manholes exceeding

in depth are to be R.C. Scotts ring construction 1200mm dia complete with galvanised step irons at 200mm ctrs and a heavy duty ductile iron two piece covers.

COVERS TO MANHOLES WILL BE AS FOLLOWS:				
Location:	TYPE			
Pedestrian/Landscaped areas	A15			
Car parks/Footpaths/Private drives	B125			
Public roads/Parking areas	D400			
Areas subject to high wheel loads	F900			

SEWERLINES Foul sewerlines to BS 4660 sewerlines where passing through walls to be protected by 150mm deep concrete lintel. Rodding access to be provided at changes in direction in pipework. Provide expansion joints at 6m cross sections to concrete surround to pipework. NOTE: All pipework encased in concrete shall firstbe wrapped in polythene.

### SMOKE ALARMS

Provide smoke alarms as indicated. Note the self contained smoke alarms should be permanently wired to a circuit which is separately fused at the distribution board and services only self contained smoke alarms.Alarm to have a battery back up All alarms to be interconnected and comply with BS 5446 Part 1 :2000 and Heat Alarms to comply with BS 5446 Part 2 :2003. Automatic fire detectors and fire alarm msystem to comply with BS 5839 Part 6 :2004 and of at least Grade D Category

### LD2 standard. GLAZING

All glazing to side screens and doors to comply with BS 6206 1981 class B. All windows with glass less than 800mm from finished floor level to be fitted with safety glass to comply

with BS 6206 Class C. NOTE: any first floor windows with opening sections less than 800mm above FFL will be fitted with guarding to comply with TECHINICAL Booklet H, 2000.

### VENTILATION

Provide trickle ventilation to all new double glazed windows. All habitable rooms to have trickle ventilation of at least 8000mm sq min all other rooms to have a min of 4000mm<sup>2</sup> minimum.

### EXTERIOR DOORS

Exterior doors to be UPVC to design as indicated door sizes 2057 x 838mm colour white. Internal doors to be SOLID PINE type fitted with 2No Butt hinges. Door furniture to be selected by client. Sizes

836 x 1981 x 35. Provide150x14mm MOULDED PINE moulded skirting. Architrave to match, internal door stops 125 x 25 mahogany, cill boards to be UPVC TO MATCH WINDOWS.

### EXTRACT FANS

Extract Fans - Provide Xpelair extract fans to kitchen bathrooms, toilets and utilityKitchen fan to be positioned within cooker hood and be capable of extracting 30 litres per second. Bathroomtoilets / En suite fan - 15 litres per second.Utility extract fan-30litres per second. Bathroom and en-suite extract fan to be activated by light switch and have a 15minute min overrun after light is switched off

### WINDOWS

All windows constructed in uPVC to have an impact strength of 12kj/k sq or higher in compliance with BS 7413.All corners to be welded joints Welded corner joints swould not fracture below a stress level of 20MPa, in compliance with BS 7413 Glazing units to be supplied in accordance with BS 952:Part 1 with glass of min thickness to satisfy BS 6262 All glazing must have protective covering during the duration of the project. Trickle ventilation to fitted in the head and colour co-ordinated with the frames.

### GENERAL NOTES

NOTE WALL MOUNTED SOCKETS OUTLETS AND SWITCHES SHALL BE LOCATED WITHIN 450MM MIN 1200MM MAX FROM FLOOR LEVEL PULL CORD SWITCH HANDLE SHALL TERMINATE NOT MORE THAN 1200MM ABOVE THE FLOOR LEVEL NOTE- BUILDER MUST ENSURE THAT THERE IS NO INFILTRATION

TO SOAKAWAYS

(SEE SITEPLAN).

OF COLD AIR, LEAKAGE, ETC TO THE MAIN FABRIC OF THE BUILDING- ALL DOORS AND WINDOWS OPENINGS TO BE DRAUGHT SEALED. NOTE THE FABRIC OF THE BUILDING TO BE DESIGNED AND

CONSTRUCTED TO LIMIT THE EFFECTS OF THERMAL BRIDGING SERVICE/ STRUCTURAL MEMBERS PENETRATING THE INSULATED FABRIC OF THE BUILDING TO BE SEALED AGAINST THERMAL LEAKAGE.

### NEW CAVITY WALL CONSTRUCTION

300mm wide with polystyrene insulation fixed to the outside of the inner leaf (see Table F) with wire wall ties at 450mm vertically and 750mm horizontally. Provide wallties at vertical ctrs not exceeding 300mm at all doors and window jambs.100mm outside concrete leaf.Cavities to be closed at verges and eaves. Stepped D.P.C's to be provided at exposed lintels. D.P.C's to all reveals and cills. Vertical D.P.C's to all windows and external door D.P.C to be 150mm min above finished ground level. Cavity fill to finish at ground level.

### STAIRCASE

Clear width to be 900mm with 2m min vertical headroom measured from pitch line. Handrails to be 900mm high and where balustrade is provided no opening to be large enough to permit a 100mm sphere to pass through, as so designed as not to be easily climbed by children, threads to be constructed of 19mm boarding with nosing to project 15mm over step below going riser to be 12mm boarding (see section for stair details ie rise and going sizes)

### SUBMITT TO BUILDING CONTROL DESIGN DETAILS AND CALCULATIONS OF TRUSSES PRIOR TO ERECTION ON SITE. SUBMITT TO BUILDING CONTROL SAP ENERGY RATING ON COMPLETION OF WORKS.

SUBMITT TO BUILDING CONTROL A COPY OF CONSENT TO DISCHARGE OF EFFLUENT ON RECEIPT BY CLIENT.





### FOUNDATIONS

600 x 250mm foundations to new cavity walls. 450 x 250mm foundations to all 100mm internal walls. Minimum bearing to be 750mm below finished ground level. Foundations to be taken down to a firm bearing stata based on 100KN/mm sq bearing capacity. If this can not be achieved an amended foundation design and soil investigation report must be forwarded to Building Control on request.

### LINTEL SCHEDULE

Clear spans up to 1.250m - 1No. 9.5mm bar to top and 1No. 12.5mm bar to bottom. Clear spans up to 1.850m - 1No. 9.5mm bar to top and 1No. 16.7mm bar to bottom. Clear spans up to 2.400m - 1No. 12.7mm bar to top and 2No. 16.7mm bars to bottom. Lintel size 100 x 215mm. Minimum bearing 150mm. 38mm minimum cover to reinforcement.

## BOILER

Boiler to be seated on 150mm deep concrete hearth and to be 50mm minimum from all wall surfaces. Flue pipes from boiler or cooker to be cast iron or mild steel and not less than 4.75mm thick and to BS 41:1964. Flues to terminate in chambers capable of holding condensate collection vessel with non combustible access door to enable inspection and cleaning.

### FIRE AND CHIMNEYS

All combustible material to be 38mm minimum away from chimney brace. Stepped D.P.C. to chimney to discharge above lead flashing.

Clay flue liners to be socketted and rebated to BS 1181 1971.

Chimney brace in roofspace to be plastered to full height .Hearth to be 125mm minimum in depth and project 500mm minimum with non combustible floor finish. Recess to fire to be 200mm minimum DRAINAGE

Provide 125mm seamless aluminum guttering with 65mm sq PVC downpipes to vertical back inlet gullies provide precast concret surrounds to all gullies. Use 50mm waste pipes to sanitary ware and 100mm diameter to wc's.

Provide vent pipes with plastic balloon to top.1.0m above nearest window head.

PVC foul and storm drains laid to fall to 1.40 and surrounded with 150mm pea gravel. Any drainage pipes within 1.0m of any part of the building

and below foundations to be surrounded and back filled with concrete to underside of founds.

150mm concrete surround to all plastic waste pipes laid under floors. All sewer pipes to BS 4660 100mm diameter PVC bedded and surrounding in 9.5mm pea gravel. Drains with less than 1.2m cover under roadways or tarmac areas to be surrounded

in ark felt and encased in 150mm concrete. Provide expansion joints every 6m cross section of concrete surround to pipes.

All pipes to have a min of 900mm cover. All pipes passing trough walls or underneath building to be protected by 150mm X 100mm reinforced concrete lintel.

### HOT PRESS

Provide 3No rows of 50 x 25mm slatted shelving resting on 50 x 38mm framing. Provide 100 x 50mm stand for hot water cylinder.

## EAVES

Provide pre-finished Aluminum fascia barge and

# LATERIAL RESTRAINT

soffits by specialist

Provide 30 x 5mm galvanised iron straps of 1.5m centres ixed across 3No members and turned 150mm down into cavity.

Provide 100 x 38mm solid bridging under restraint.

## TRAP DOOR

Provide 100x50mm trimmers to 750x750mm trapdoor with 190x38mm battens nailed across double trusses to each side of trapdoor.

Provide double trusses to each side of trapdoor Trapdoor to be sealed at perimeter and bolted /clamped shut.

PROVIDE 60MM QUINN THERM TO FIXED TO UPPER SIDE OF TRAPDOOR

## ROOF

REDLAND TILES (black) on 50 x 25mm timber battens on reinforced slaters felt on ATTIC ROOF TRUSSES at 400mm ctrs as constructed by Omagh Building Supplies or equal 100 x 50mm wallplate strapped to wall every 1.8m ø. 125 x 25mm diagonal bracing 100 x 38mm longitudinal bracing as indicated Use aluminum facias soffits and barges through out NOTE: All timbers to comply with strength Class 3 (SC3). ALL STRUCTURAL TIMBER TO BE STRUCTURAL CLASS C16 OR C24 DRY OR KILN DRIED AND CLEARLY MARKED.TRUSSED RAFTERS TO DESIGNED FABRICATED AND BRACED IN ACCORDANCE WITH BS 5268 PART 3 1998 MANUFACTURES DETAILS OF TRUSSES MUST BE FOWARDED TO BUILDING CONTROL **3 WEEKS PRIOR TO FABRICATION** 

## FLOOR

100mm concrete screed. FLOOR INSULATION AS TABLE F Damproof membrane (Visqueen 2000) on Patent Radon barrier 100mm concrete subfloor on 225mm min hardcore. Hardcore to be mechanically compacted in

layers not exceeding 225mm and to a depth not exceeding 600mm. NOTE RADON MEMBRANE TO EXTEND ACROSS ENTIRE FOOT PRINT OF THE DWELING EMITTING TO THE EXTERNAL AIR. DESIGN TO ENSURE THAT THERE IS NO INGRESS OF MOISTURE

# DESMOND O'NEILL ARCHITECTURAL & DESIGN SERVICES

Project Title

# PROPOSED DWELLING. AT CROCKADREEN FIVEMILETOWN

Drawing Title Office Address PLAN AND ELEVATION Drawing Number E-mail -LK 001 Scales 1-50 Date sep 01

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Revisions

### PART F · Dwelling to be constructed to details given in the Department for Communities and Local Government (DCLG) publication "Accredited Construction details for Part F".

All fixed building services shall be commissioned in accordance with the procedure given in the DCLG publication "Domestic Heating Compliance Guide" for the relevant fuel type(s), and in accoradnace with the manufacturere's commissioning procedures.

The builder shall demonstrate that an appropriate system of site inspection is in place to ensure that the construction standards achieve the required level of consistency.

A report shall be provided showing that the construction checklist given in the DCLG published "Accredited Construction details for Part F" have been completed and show satisfactory results. A Copy of this Report shall be forwarded to the Building Control Department

The building design Dwelling carbon dioxide Emission Rate (DER) has been developed using the Design Air permeability stated in Table F. The builder must ensure that this air permeability is not exceeded

The completed building shall be Air Pressure Tested in accordance with the Air Tightness Testing and Measurement Association (ATTMA) publication "Measuring Air Permeability of Building Envelopes". The tests shall be carried out by a suitably qualified person such as a tester who is registered with or approved by the British Institute of Non-destructive Testing in respect of pressure testing for the air testing of buildings.

At completion stage, an 'As built' DER calculation will be completed using the same software that was used for the 'Design' DER, to confirm that the 'As built' DER of the building is equal to or less than the Target Carbon dioxide Emission Rate (TER) A copy of the 'As Built' will be submitted to the Building Control Department.

At completion stage, a copy of the SAP Energy Rating Notice will be submitted to District Building Control Office.

A SAP Rating Notice of the building will be permanently on display in the building, e.g. adjacent or within the meter cupboard. The SAP Rating Notice will be produced using the same software as the DER calculation.

Oil boiler installations: The boiler efficiency will be not less than the efficiency quoted in the Table F shown below.

Oil fired systems for space heating and domestic hot water primary circuits should have fully pumped circulation. If the boiler manufacturer's instructions advise installation of a bypass, an automatic bypass valve must be provided in conjunction with any requirements for a minimum pipe length specified in the manufacturer's

à · Hot Water Storage: o Vented copper hot water storage vessels will comply with the heat loss and heat exchanger requirements of BS1566: 2002 o Unvented hot water storage systems products will: i. Comply with BS7206: 1990; or ii. Be certified itish Board of Agrement, the Water Research Council; or iii. Be certified by another accredited body as complying with Building Regulations o All hot water storage vessels will carry a label with the following nformation: § Type of vessel; § Nominal capacity in litres; § Standing heat loss in kWh/day; § Vented copper hot water cylinders will carry clear labelling on the product such as a BSI Kitemark, registered firm status or reference to an equivalent quality control scheme; § Vented cylinders which are not of copper construction will be labelled as complying with the heat loss and heat exchanger requirements of BS1566: 2002

System preparation and water treatment: Central heating systems should be thoroughly cleaned and flushed out before installing a new boiler. During final filling of the system, a chemical water treatment formulation should be added to the primary circuit to control corrosion and the formation of scale and sludge. Reasonable provision would be to follow the guidance on how to prepare and commission systems given in BS 7593: 1992. Installers should also refer to the boiler manufacturer's installation

instructions for appropriate treatment products and special requirements for individual boiler models. Where the mains water hardness exceeds 200 parts per million, provisions should be made to treat the feed water to water heaters and the hot water circuit of combination boilers to reduce the rate of accumulation of the lime scale.

Commissioning boiler and hot water storage system: On completion of the installation of the boiler or the hot water storage system, together with associated equipment such as pipework, pumps and controls, the equipment must be commissioned in accordance with the manufacturer's instructions. These instructions must be specific to the particular boiler and / or hot water storage system. The installer must give a full explanation of the system and its operation to the user, including the manufacturer's user manual and operational and maintenance instructions, to enable the dwelling and its fixed building services to be operated and maintained in an energy efficient manner.

A Notice confirming that all fixed building services have been properly commissioned shall be provided and a copy shall be given to the District Building Control Office and the building owner. The Notice shall be signed by a suitably qualified person.

 Boiler Interlock: The boiler-based system will have a boiler control interlock in which controls are wired so that when there is no demand for either space heating or hot water, the boiler and pump are switched off. The use of Thermostatic Radiator Valves (TRV's) alone does not provide

à · Space heating zones: Dwelling with a total usable floor area up to 150m2 will be divided into at least two space heating zones with ndependent temperature control, one of which is assigned to the living

Dwelling with at total usable floor area greater than 150m2 will be provided with at least two space heating zones, each having separate timing and temperature controls. Single-storey open-plan dwellings in which the living area is greater than 70% of the total floor area sub-zoning of the temperature

control is not appropriate. Water heating zones: The dwelling will have a separate hot water

zone in addition to space heating zones. See Table F. Time control of space and water heating: Time control of space heating and water heating will be provided by: i. A full programmer with separate timing to each circuit; ii. Two or more separate timers providing timing control to each circuit; or programmable room thermostat(s) to the heating circuit(s), with separate timing of the hot water circuit.

See Table F. For dwellings with a total usable floor area greater than 150m2 timing of the separate space heating zones can be achieved by: i. Multiple heating zone programmers; or ii. A single multi-channel programmer; or iii. Programmable room thermostats: or eparate timer to each

circuits: or v. A combination of (iii) and (v) above.

See Table F.

Temperature control of space heating: Separate temperature control of zones within the dwelling, will be provided, using; i. Room thermostats or programmable room thermostats in all zones; or ii. A room thermostat or programmable room thermostat main zone and individual radiator controls such as Thermostatic Radiator Valves (TRVs) on all radiators in the other zones; or iii. A combination of (i) and (ii).

See Table F. Temperature control of hot water service system: Domestic hot water systems will be provided with a cylinder thermostat and a zone valve or three-port valve to control the temperature of stored hot water. In dwellings with a total floor area greater than 150m2 it could be reasonable to provide more than one hot water circuit, each having

separate timing and temperature controls. This will be achieved by: Multiple heating zone programmers; or ii. A gle multi-channel programmer; or iii. Separate timer to each The use of non-electric hot water controllers does not meet this requiremer

Also, in some circumstances, such as thermal stores, a zone valve is not appropriate; a second pump could be substituted for the zone valve. Insulation of pipes serving oil-fired central heating systems: New

pipes will be insulated with insulation complying with the requirements of the Domestic Heating Compliance Guide (in line with the maximum permissible heat loss indicated in the Supplentary information column, see Table F), and labelled accordingly.

The building owner shall be given sufficient information, including operational and maintenance instructions, to enable the dwelling and its fixed building services to be operated and maintained in an energy efficient manner. The instructions shall be directly related to the specific system(s) installed in the dwelling and shall be readily understandable by the occupier.





Mec. ext. fan to ENSUITE

All glazing to side screens and doors to comply with BS 6206 1981 class B. All windows with glass less than 800mm from finished floor level to be fitted with safety glass to comply with BS 6206 Class C (indicated by shading)

not less than 900mm. landing area to be 1200mm.

REAR ELEVATION,



Table F Insulation for pipe-work	
Pipe Diameter (OD)	Maximum permissible
	heat loss (W/m)
8mm	7.06
10mm	7.23
12mm	7.35
15mm	7.89
22mm	9.12
28mm	10.07
35mm	11.08
42mm	12.19
54mm	14.12

All pipe-work to be insulated and labelled according the Domestic Heating Compliance Guide

Primary circulation pipes for heating and hot water circuits must be insulated wherever they pass outside the heated living space or through voids which communicate with and are ventilated from unheated

Primary circulation pipes for domestic hot water circuits must be insulated throughout their length, subject only to practical constraints imposed by the need to penetrate joists and other

structural elements. All pipes connected to hot water storage vessels, including the vent pipe, must be insulated for at least 1m from their point of connection to the cylinder (or they should be insulated up to the point where they become concealed If secondary circulation is used, all pipes kept hot by that

irculation must be insulated For Replacement Systems: Whenever a boiler or hot water storage vessel is replaced in an existing system, any pipes (in the situations above) that are exposed as part of the work or are otherwise accessible

will be insulated with insulation complying ith the requirement of the Domestic Heating Compliance Guide (in line with the maximum permissible heat loss indicated in the Supplementary Information column, see Table F1) and labelled accordingly.

Fixed Internal lighting: Fixed internal energy efficient light fittings to be installed in the most frequented areas in the dwelling, and there shall be not less than: i. One per 25m2 of dwelling floor area (excluding garages) or part thereof; or i ne per four light whichever is greater.

The energy efficient light fitting (including the lamp, control gear and an appropriate housing, reflector, shade or other device for controlling the light output) is a light fitting that can only be fitted with lamps having a luminous efficacy greater t han 40 lumens per circuit-Watt.

[fluorescent and dedicated compact fluorescent light fitting would meet this requirement, but those accommodating GLS tungsten lamps and compact fluorescent lamps (CFLs) with a bayonet cap or Edison screw base, or tungsten halogen lamps would not.] Fed External lighting: External lighting permanently fixed to an external surface of the dwelling and under the direct control of the occupant by having an electricity supply from the dwelling shall: i. Have a maximum output of 150W per fitting and a utomatically switch off – a. When there is adequate daylight; and b. When not required at night; or ii. Have that can only be fitted with

lamps having a luminous efficacy greater than 40 lumens per circuit-Watt.

Dwelling constructed to DCLG published "Accredited Construction details for Part F "	
nternal energy efficient fixed lighting	One per 25m2 of dwelling floor ar cluding garages) or part thereof; or One per four light fittings. Whichever is greater.
HWC capacity	145 litres
HWC Factory insulated jacket	50mm thick
Dil fired boiler to have SEDBUK	93 %
efficiency rating of	
Full Zone Control to Space Heating	Full Zone control
and HWC	070/
HETAS approved Duel fuel open	37%
ire with efficiency rating of All External Glazing is Double Glazed	Soft Coat Low E (en= 0.05)
with 16mm + air gap	
Design Air Permeability to be not more than	8m3 /(h.m2) @ 50Pa
Wire type wall ties to be used in cavity wall	Wire type
nner leaf of cavity wall to be dense concrete	
block work with a density of	2000kg/m3
Block Cavity Wall insulation has the thermal conductivity of not greater than 23 W/m k (e.g. Xtratherm XT/CW)	60mm thick
Floor insulation has the thermal conductivity of not greater than 0.023 W/m k	90mm thick
e.g. Xtratherm XT/UF)	
Pitched Roof insulation is Fibre Glass (0.040 W/m k) plus insulation with a thermal conductivity of not greater than 0.023 W/m k (e.g. Xtratherm XT/TL)	200mm Fibre Glass between joists PLUS35mm QUINN THERM (U-value = 0.18 W/m2k)
Coved Roof insulation has the thermal conductivity of 0.023 W/m k. 100mm between afters plus 35mm below rafters (e.g. Xtratherm XT/PR & XT L).	100mm plus 35mm (U value = 0.23 W/m2k)
Dormer Cheek has 100mm insulation between studs plus 35mm on inside face of studs. The insulation has a thermal conductivity of not more than 0.023 W/m k e.g. Xtratherm XT/PR & XT/TL).	100mm plus 35mm (U-value = 0.25W/m2k)
Stud wall to roof void has 100mm insulation petween studs plus 25mm on inside face of studs. The insulation has a thermal conductivity of not more than 0.023 W/m k(e.g. Xtratherm XT/PR & XT/TL).	100mm plus 35mm (U-value = 0.25W/m2k)
nsulation to jamb/head/cill is to have a	20mm thick polystyrene-
ninimum thermal resistance path through the	dense block with cement
cavity closure of not less than	render. (R-value = 0.57m2K/W
0.45m2K/W.	
nsulation between upper corner of wallplate and sarking board has a minimum R-value across the thickness of the insulation of not ess than 1.2 m2.k/W	65mm thick fibre glass. (R-value of 1.63 m2.k/W)
ess triat 1.2 mi2.xVW insulation to vertical edge of floor screed has a minimum R-value of not less than 0.75 m2KW through the depth of screed. The insulation has a thermal conductivity of 1ot more than 0.023W/m (e.g. Xtratherm XT/UF)	20mm thick Xtratherm (R-value = 0.87 m2K/W)

PART L · Ventilation: Grills or meshes protecting air vents from the entry of animals or bird shall have individual aperture dimensions of not less than 5mm.

Room containing open-flued appliance will have a continuous supply of air from outside the building through a permanently open air vent.

Type of appliance	Type and amount of ventilation		
Open appliance such as an open	Permanently open air vent(s) with a		
fire with no throat, e.g. a fire	total free area or not less than		
under and open canopy	50 the cross-sectional area of the		
	flue.		
	Permanently open air vent(s) with a		
Open appliance, such as an open	total free area or not less than		
flue with a throat	50% of the throat opening area.		
	Permanently open air vent(s) with a		
	total free area or not less than		
Other appliance, such as a stove,	300mm2 per kW for each of the		
cooker or boiler, with a flue	first 5 kW of appliance rated heat		
draught stabiliser.	output, PLUS, a total free area of		
	not less than 850mm2 for every kW		
	of appliance rated heat output above		
	5 kW.		
Other appliance, such as a stove,	Permanently open air vent(s) with a		
cooker or boiler,	total free area or not less than		
with no flue draught stabiliser.	500mm2 for every kW of appliance		
	rated heat output above 5 kW.		

Interaction of mechanical extract ventilation and open-fired

combustion appliances:

- i. For a gas appliance where a room contains an open-flued appliance, the room extract fan rate shall not exceed 20 litres/second (72 m3/hour), and a spillage tes recommended in BS5440-1:200 shall be carried out. ii. For an oil appliance – the room extract fan capacity shall be limited as described in OFTEC Technical Information Note T1/112 and a flue draught interference test as described in
- T1/112 shall be carried out. iii. For a solid fuel appliance -a room extract fan shall not be installed in the same room unless such an installation follows HETAS guidance.
- iv. For commercial and industrial installations-specialist advice from a mechanical/service engineer shall be necessary with regard to the possible need for the interlocking or gas heaters and any mechanical ventilation system.

Ventilation to open flued oil fired appliance: Open flued oil fired appliances shall have a free area of permanently open air vents 550mm2 per kW output in excess of 5 kW PLUS a further 550mm2 per kW output if the appliance is fitted with a draught break. For Open Flued appliances and Room Sealed appliances within compartments, the compartment must be ventilated in accordance with

Ventilation for flueless gas appliances: A room containing a gas point intended for use with a flueless appliance (such as a cooker, or space heater or water heater, with the gas point not adjacent to a flue) shall have the ventilation provision calc ated on the basis that an appliance with the largest rating consistent with the table below could be installed there

Diagram 4.1 in Technical Booklet L.

Ventilation for flueless gas appliances				
Flueless appliance type	Maximum appliance rated heat input	Volume of room, space or internal space (m3)	Free area of permanetly open air vent (mm <sup>2</sup> ) (1)	
Cooker, oven hotplate or grill or combination thereof	not appllicable	< 5 5 to 10 < 10	1000 5000 (2) No permanently open vent needed	
Instantaneous water heater	11 kW(net)	<5 5 to 10 > 10 to 20	Installation of water heater not permitted 1000 5000	
		> 20	No permanetly open vent needed	
Space heater not in an internal space	0.045 kW(net) per m3 volume of room or space	All cases	10000 PLUS 5500per kW input(net) in excess of 2.7 kW(net)	
Space heater in an internal space	0.090 kW(net) per m3 volume of room or space	All cases	10000 PLUS 2750 per kW input (net) in excess of 5.4 kW(net)	

1. For LPG firedspace heaters conforming to BS EN 449: 2002 the recommendation of BS 5440-2: 2000 shall be followed. 2. No permanent open air vent is required if the room or space has a

door which opens directly to the outside. Condensates in flues:

i. The flue for a non-condensing combusting appliance shall

be insulated so that flue gas does not condense during normal operation; or

ii. The flue for a condensing combustion appliance shall -

- a. Be lined with components impervious to condensates and resistant to corrosion,
- avoiding ledges, crevices etc; and b. A suitable drain shall be fitted to the combustion
- appliance for the disposal of condensate.

• The flue type for oil fired appliances: Information will be provided from the appliance manufacturer to confirm that the oil fired appliance flue temperature will not exceed 250oC, and i. The flue shall be built using factory-made components that h been independently certified as achieving a performance at least equal to that corresponding to the designation given in the following table for the intended appliance type, when tested to an appropriate European chimney standard; and ii. Be installed in accordance the provisions of Technical Booklet L paragraphs 4.17 to 4.20 and Section 1, and in accordance with the appliance manufacturer's and component manufacturer's installation instructions.

A Minimum performance designations for chimney, flue and fluepipe					
components for use with new oil fir	components for use with new oil fired appliances with flue gas				
temperatures not greater than 250oC					
Appliance type Fuel oil Minimum designation					
Boiler, including combination	Class C2	T250 N2 D 1 0			
boiler pre jet burner					
Cooker - pressure jet burner	Class C2	T250 N2 D 1 0			
Cooker and room heater-					
vaporizing burner	Class C2	T250 N2 D 1 0			
Cooker and room heater-					
vaporizing burner	Class D	T250 N2 D 2 0			
Condensing pressure jet					
burner appliance	Class C2	T160 N2 W 1 0			
Condensing vaporizing					
burner appliance	Class D	T160 N2 W 2 0			

1. The designation of chimney products is described in BS EN 1443: 2003. The BS EN for the product will specify its full designation and marking requirements.

2. These are default designations. Where the appliance manufacturers installation instru ctions specify a higher designation, this shall be complied with.

The heating and hot water systems shall be designed, installed and commissioned such that, for the purposes of the conservation of fuel and power, the system and its controls are handed over in efficient working









v. Format of notice plate shall be similar to that shown in diagram 1.7 of Technical Booklet L Notice plates shall be robust, indelibly marked and securely fixed in an unobtrusive but obvious position within the building such as: - i Next to the ele city consumer unit: or ii

Next to the chimney or hearth described. For flue products whose performance characteristics have been assessed in accordance with a European Standard (EN) and which are supplied or marked with a designation, the installer shall include this designation, under additional information, on the not ice plate

Heating Oil storage tank: The oil storage tank shall be constructed in accordance with the recommendations of: - i. BS 799-5: 1987, for steel storage tanks; and ii. OFS T 100: 1995, for medium density

The above ground oil tank shall be an integrally bunded type. The bund shall have a capacity of not less than 110% of the tank it contains. The tank shall be placed on a hard surface constructed of concrete or paving slabs not less than 42mm thick. The hard surface shall extend beyond the tanks external surface by not less than 300mm. A 30 minute fire resistant Fire wall shall separate the oil storage tank from any building within 1800mm of the oil storage tank. The 30 minute fire resistant Fire wall shall extend not less than 300mm higher and wider than the oil storage tank. Or Any part of the building or eaves within 1800mm of the oil storage tank shall be imperforate and

A 30 minute fire resistant Fire wall shall separate the oil storage tank from any site boundary within 750mm of the oil storage tank. The 30 minute fire resistant Fire wall shall extend not less than 300mm higher and wider than the oil storage tank.

Automatic isolation: The fuel pipework from the oil storage tank to oil burner shall be resistant to the effects of fire and fitted with a fire valve system where it enters the building, in accordance with BS 5410 Part 1: 1997, Sections 8.2 and 8.3.

All pipework shall be rigid and firmly fixed, and protected where necessary against damage. Joints shall be kept to a minimum and the use of plastic coated malleable copper pipe is recommended Inside the building every effort shall be made to avoid the use of joints between the entry point of the pipe and the boiler connection Where pipes pass through the wall of buildings they shall be sleeved. Pipes shall be adequately supported to prevent sagging. Buried pipes shall be located where the chance of damage from digging or other activities is minimal. Where this cannot be done, the pipework shall be protected by covering with tiles.

A Fire valve shall be fitted to fuel pipework to cut off the supply of oil remotely from the heating appliance in the event of accidental fire occurring in or around the appliance. For appliances inside buildings (including appliance inside an external boiler hut), the oil supply shall be shut off externally to the building (external to boiler hut). Valve sensors shall be positioned inside the appliance casing over the burner. The sensor activating temperature shall be rated so as not to cause nuisance cut outs and the sensor will be located in a position recommended by the manufacture

Fire valves shall be in accordance with the following:- i. They will be capable of sensing a fire inside or close to a heating appliance and also shut off the oil supply externally from the

ii. In the event that any part of the valve becoming damaged, it shall close off the supply of oil. iii. Manual operation shall be necessary in order to pass oil after

iv. It shall be provided with a means for testing for satisfactory operation and for resetting manually.

v. Electrically operated fire valves shall be suitably designed with electrically operated valve coupled to thermal fuses located as described in BS 5410 Part 1: 1997, paragraph 8.3.1. The valve shall be self-closing on open circuiting of the thermal ses, and shall be installed so that the oil pressure exerted by the head of

oil in the tank assists closure. The thermal fuses shall be of the type which remains open circuited after operation. vi. A weight or spring loaded valve can be used. It shall be held

open by a flexible cable with fusible links inserted in its I ength over each firing point. At all changes of direction, the flexible cable shall pass over a corrosion resistant metal p ley with good

quality bearing and a diameter of not less than 40mm. vii. Where the sensitive element is positioned externally to any appliance casing it shall be located at a maximum of 1m directly above

viii. Electrical circuit shall be independent of the burner and other

Condensing boiler condensate drain: Condensing boiler shall be connected to a drain to dispose of the condensate Typical connections are: i. Internal stack pipe; ii. Waste pipe;

External drain, or gully; iv. Rainwater hopper that is pa mbined system; or v. Purpose made soakaway.

Where no suitable drain point is available, a soakaway shall be used and will be located as close as possible to the boiler but at least 1m clear of building foundations. Externa I pipework will be kept to a minimum and not more than 3m in length. Any external pipework shall be i

nsulated to minimise the risk of freezing. Condensate drain shall have a minimum fall of 1 in 25. The condensate drain shall have a minimum 75mm trap to prevent foul

smells entering the building and an 'air break' shall be provide between the trap and the appliance internal trap. The condensate drain shall be fixed at maximum spacing of 0.5m for horizontal and 1.0m for vertical sections. The internal condensate drain shall have a minimum nominal diameter of 22mm. The external condensate drain shall have

a minimum nominal diameter of 32mm. The material shall be plastic and resistant to acid. Copper and mild steel pipes and fittings shall not be used.  $\tilde{A} \cdot \ Location$  and support of LPG cylinders: Where a set of cylinders

are to be used, the cylinders shall stand upright, be secured by straps or chains against a wall outside the building in a well ventilated position at ground level. They shall be ready accessible and protected from physical damage.

The cylinders shall stand on a firm level base, such as concrete not less than 50mm thick or paving slabs bedded on mortar. The cylinders shall be separated from openings to the building and drains or gullies as shown in diagram 5.2 of Technical Booklet L.

Interaction of mechanical extract ventilation and open-fired combustion appliances: i. For a gas appliance - where a room contains an open-flued

- appliance, the room extract fan rate shall not exceed 20 litres/second (72 m3/hour), and a spillage tes recommended in BS5440-1:200 shall be carried out.
- ii. For an oil appliance the room extract fan capacity shall be limited as described in OFTEC Technical Information Note T1/112 and a flue draught interference test as described in T1/112 shall be carried out.
- iii. For a solid fuel appliance -a room extract fan shall not be installed in the same room unless such an installation follows
- HETAS guidance. iv. For commercial and industrial installations-specialist advice from a mechanical/service engineer shall be necessary with regard to the possible need for the interlocking or gas heaters and any mechanical ventilation system.

Ventilation to open flued oil fired appliance: Open flued oil fired appliances shall have a free area of permanently open air vents 550mm2 per kW output in excess of 5 kW PLUS a further 550mm2 per kW output if the appliance is fitted with a draught break. For Open Flued appliances and Room Sealed appliances within compartments, the compartment must be ventilated in accordance with Diagram 4.1 in Technical Booklet L.

· Ventilation for flueless gas appliances: A room containing a gas point intended for use with a flueless appliance (such as a cooker, or space heater or water heater, with the gas point not adjacent to a flue) shall have the ventilation provision calc ated on the basis that an appliance with the largest rating consistent with the table below could be installed there

Ventilation for flueless gas appliances				
Flueless appliance type	Maximum appliance rated heat input	Volume of room, space or internal space (m3)	Free area of permanetly open air vent (mm <sup>2</sup> ) (1)	
Cooker, oven hotplate or grill or combination thereof	otplate or grill		1000 5000 (2) No permanently open vent needed	
Instantaneous water heater	11 kW(net)	<5 5 to 10 > 10 to 20 > 20	Installation of water heater not permitted 1000 5000 No permanetly open	
Space heater not in an internal space	0.045 kW(net) per m3 volume of room or space	All cases	vent needed 10000 PLUS 5500per kW input(net) in excess of 2.7 kW(net)	
Space heater in an internal space	0.090 kW(net) per m3 volume of room or space	All cases	10000 PLUS 2750 per kW input (net) in excess of 5.4 kW(net)	

1. For LPG firedspace heaters conforming to BS EN 449: 2002 the ecommendation of BS 5440-2: 2000 shall be followed. 2. No permanent open air vent is required if the room or space has a

door which opens directly to the outside.

Condensates in flues: i. The flue for a non-condensing combusting appliance shall

be insulated so that flue gas does not condense during normal operation; or

ii. The flue for a condensing combustion

appliance shall a. Be lined with components impervious to

condensates and resistant to corrosion,

- avoiding ledges, crevices etc; and b. A suitable drain shall be fitted to the combustion
- appliance for the disposal of condensate.

The flue type for oil fired appliances: Information will be provided from the appliance manufacturer to confirm that the oil fired appliance flue temperature will not exceed 250oC, and i. The flue shall be built using factory-made components that h been independently certified as achieving a performance at least equal to that corresponding to the designation given in the following table for the intended appliance type, when tested to an appropriate European chimney standard; and ii. Be installed in accordance the provisions of Technical Booklet L paragraphs 4.17 to 4.20 and Section 1, and in accordance with the appliance manufacturer's and component manufacturer's installation instructions.

A Minimum performance designations for chimney, flue and fluepipe components for use with new oil fired appliances with flue gas

compendite for use married appliances married gue				
temperatures not greater than 250oC				
Appliance type Fuel oil Minimum designation				
Boiler, including combination	Class C2	T250 N2 D 1 0		
boiler pre jet burner				
Cooker - pressure jet burner	Class C2	T250 N2 D 1 0		
Cooker and room heater-				
vaporizing burner	Class C2	T250 N2 D 1 0		
Cooker and room heater-				
vaporizing burner	Class D	T250 N2 D 2 0		
Condensing pressure jet				
burner appliance	Class C2	T160 N2 W 1 0		
Condensing vaporizing				
burner appliance	Class D	T160 N2 W 2 0		

1. The designation of chimney products is described in BS EN 1443: 2003. The BS EN for the product will specify its full designation

and marking requirements

2. These are default designations. Where the appliance manufacturers installation instru ctions specify

a higher designation, this shall be complied with.

The heating and hot water systems shall be designed, installed and commissioned such that, for the purposes of the conservation of fuel and power, the system and its controls are handed over in efficient working

# **DESMOND O'NEILL ARCHITECTURAL & DESIGN SERVICES**

Project Title

PROPOSED DWELLING. AT CROCKADREEN FIVEMILETOWN

Drawing Title

FIRST FLOOR PLAN AND ELEVATIONS

Drawing Number

LK 003 Scales

1-50 Date

sep 01

Revisions

Office Address 17 MAIN STREET DROMORE, CoTYRONE. BT78 3AE. tel-fax 028 82 897052 E-mail -

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Radon Collection Sump

NEW CAVITY WALL CONSTRUCTION 350mm wide with 60mm polystyrene insulation fixed to the outside of the inner leaf with vertical twist galvanised wall ties at 450mm vertically and 750mm horizontally. Provide wallties at vertical ctrs not exceeding 300mm at all doors and window jambs.100mm outside concrete leaf.Cavities to be closed at verges and eaves. Stepped D.P.C's to be provided at exposed

lintels. D.P.C's to all reveals and cills. Vertical D.P.C's to all windows and external door jambs. D.P.C to be I50mm min above finished ground

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level. Cavity fill to finish at ground level. FOUNDATIONS

600 x 250mm foundations to new cavity walls. 450 x 250mm foundations to all 100mm internal walls. Minimum bearing to be 750mm below finished ground Foundations to be taken down to a firm bearing stata based on IOOKN/mm sq bearing capacity If this can not be achieved an amended foundation design and soil investigation report must be forwarded to Building Control on request FLOORS

IOOmm concrete screed. 25mm polystyrene H.D. grade insulation. Damproof membrane (Visqueen 2000) on 100mm concrete subfloor on 150mm min hardcore. Hardcore to be mechanically compacted in layers not exceeding 225mm and to a depth not exceeding 600mm.

### LINTEL SCHEDULE

Clear spans up to 1.250m - INo. 9.5mm bar to top and INo. I2.5mm bar to bottom. Clear spans up to I.850m - INo. 9.5mm bar to top and INo. 16.7mm bar to bottom. Clear spans up to 2.400m - INo. 12.7mm bar to top and 2No. 16.7mm bars to bottom. Lintel size 100 x 215mm. Minimum bearing I50mm. 38mm minimum cover to reinforcement.

### DRAINAGE

Provide 125mm seamless aluminum guttering with 65mm sq PVC downpipes to vertical back inlet gullies.Use 50mm waste pipes to sanitary ware and IOOmm diameter to wc's. Provide vent pipes with plastic ballon to top. I.Om above nearest window head. PVC foul and storm drains laid to fall to 1.40 and surrounded with 150mm pea gravel. Any drainage pipes within 1.0m of any part of the building and below foundations to be surrounded and back filled with concrete to underside of founds. 150mm concrete surround to all plastic waste pipes laid under floors. All sewer pipes to BS 4660 100mm diameter PVC bedded and surrounding in 9.5mm pea gravel. Drains with less than 1.2m cover under roadways or tarmac areas to be surrounded in ark felt and encased in 150mm concrete. Provide expansion joints every 6m cross section of concrete surround to pipes. All pipes to have a min of 900mm cover. EAVES

Provide TURNER SLATE TRIM

STUD WALL CONSTRUCTION 75 x 38mm studding at 400mm centres. 75 x 38mm noggins at 1.2m centres. 9.8mm plasterboard and skim to both faces. Provide twin joists under parallel walls.

### LATERIAL RESTRAINT

Provide 30 x 5mm galvanised iron straps of 1.5m centres fixed across 3No members and turned 150mm down into cavity. Provide 100 x 38mm solid bridging under restraint.

### TRAP DOOR

Provide IOOx50mm trimmers to 750x750mm trapdoor with190x38mm battens nailed across two trusses to each side of trapdoor.

### MANHOLES

Manholes to sizes and locations as indicated. Manholes in grassed areas and paths to be provided with M.S. galvanised covers and frames.Provide heavy duty ductile iron covers to all manholes in driveways and roads. Manholes to be built with 215mm engineering brick class B. and pointed in 1:3 C.M. 150mm deep class 22.5/40 concrete base. Sand/cement benching to sewer pipe. Manholes exceeding 900mm in depth are to be R.C. Scotts ring construction 1200mm dia complete with galvanised step irons at 200mm ctrs and a heavy duty ductile iron two piece covers.

SEWERLINES Foul sewerlines to BS 4660 sewerlines where passing through walls to be protected by 150mm deep concrete lintel. Rodding access to be provided at changes in direction in pipework. Provide expansion joints at 6m cross sections to concrete surround to pipework. NOTE: All pipework encased in concrete shall first

be wrapped in polythene.



# **SIDE ELEVATION**



# **REAR ELEVATION**



|81

900

415

485



# **DESMOND O'NEILL ARCHITECTURAL & DESIGN SERVICES**

Project Title

# PROPOSED GARAGE AT CROCKADREEN FIVEMILETOWN Drawing Title

PLAN AND ELEVATION

Client

Drawing Number LK 005 Scales 1-50 Date

**SEP 10** 

## Revisions

Office Address

17 MAIN STREET, DROMORE, CoTYRONE. BT78 3AE. tel-fax 028 82 897052 E-mail dessie.oneill@btinternet.com



	No	Species	Planting Sizes		Nature Height.	Comments	
		Thorn & Beech (Wixed hedge row of-	Height	Girth	Centres		
	1	fagus purpurea and crataegus crusgalli)	750mm bare root quic	s /	200mm ctrs double row	hedge lopped at a height of 4.5	
	2	Cherry (prunus purpurea)	1.2 metres	55mm	6.0m ctrs	10.0 metres	trees planted as indicated on plan
	3	Ash (fraxinus pendula)	1.2 metres	55mm	6.0m ctrs	10.0 metres	
	4	Rowen (sorbus aucuparia)	1.2 metres	55mm	6.0m ctrs	10.0 metres	
lants of simlar species	5	Hornbeam (carpinus betulus fastigiata)	1.2 metres	55mm	6.0m ctrs	10.0 metres	
	6	Silver Birch (betula pendula )	1.2 metres	55mm	6.0m ctrs	10.0 metres	
	7	Weening Ash (fraxinus pendula)	1.2 metres	55mm	6.0m ctrs	10.0 metres	

## **DESMOND O'NEILL ARCHITECTURAL & DESIGN SERVICES**

Project Title PROPOSED DWELLING





# DESMOND O'NEILL ARCHITECTURAL & DESIGN SERVICES

Project Title PROPOSED DWELLING

Drawing Title	
LOCATION PLAN	Office Address
	17 MAIN STREET,
Client	DROMORE, CoTYRONE.
	BT78 3AE.
Drawing Number	tel-fax 028 82 897052 E-mail -
LK 004	dessie.oneill@btinternet.com
Scales	
1-2500	
Date	
SEP 10	OS SHEET 232-01
Revisions	