

ENERGY AUDIT REPORT

House No. 4 - Detached House - 1998 - Hollow Block Construction - 139.12m² (1500ft²)



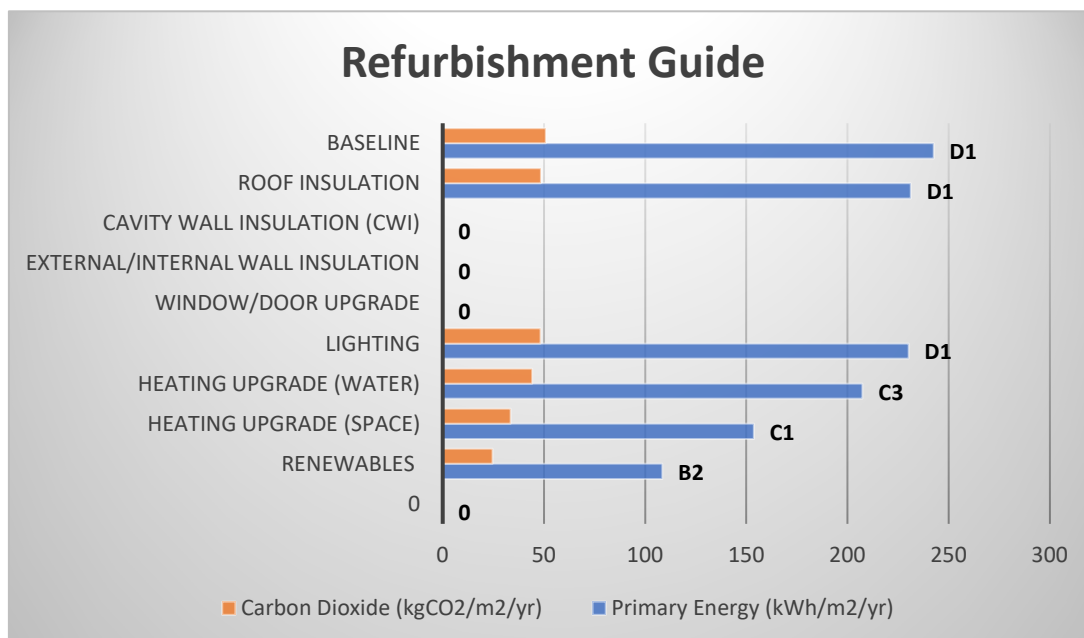
Greystones/Delgany, County Wicklow

Existing Building Details			
Building Elements		Insulation Thickness (mm)	U-Value (W/m ² .K)
Walls	Other	50mm-100mm	0.55
Roof	Pitched Roof insulated at ceiling	100mm-150mm	0.4
Floor	Solid Floor	Unknown	0.34
Windows	Double Glazed Air filled	N/A	2.8
Doors	Glazed Door	N/A	3

Existing Heating Characteristics			
Heating System		Energy	Efficiency (%)
Primary Heating System	Gas boiler, primary pipework uninsulated	Mains Gas	73%
Secondary Heating System	Open fire	Mains Gas	30%
Domestic Hot Water	Heated with Primary heating system & Electric immersion		
Cylinder	Cylinder with factory fitted insulation (30mm)		
Controls	Programmer only		

Domestic Retrofit Guidelines (Step by Step)			Energy Consumption (kWh/m ² /yr)	Carbon Emissions (CO ₂) (kgCO ₂ /m ² /yr)	Building Energy Rating (BER)	
Energy Efficient Measures			Target U-Value (W/m ² .K)	Current Usage (242.54)	Current Emissions (50.89)	Current BER (D1)
1	Roof insulation	Loftwool Insulation top-up to achieve minimum 300mm across all roof area.	0.13	231.33	48.47	D1
2	Cavity Wall Insulation (CWI)	Pump Existing cavity with a bonded bead insulation	N/A			
3	External/Internal Wall Insulation	Install Wall Insulation (internal or External), thickness -100mm	N/A			
4	Window/Door Upgrade	Replace existing glazing with Double/Triple glazed,(low E) units	N/A			
5	Lighting	Install energy efficient light bulbs (LEDs)	N/A	230.22	48.28	D1
6	Heating Upgrade (Water)	Install Kronotherm HP	N/A	207.42	44.25	C3
7	Heating Upgrade (Space)	Install Condensing Gas Boiler	N/A	153.68	33.58	C1
8	Renewables	Install 1.2 kWp Solar PV system	N/A	108.49	24.69	B2
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Estimated Costs Summary				
Measures		Estimated Costs (€/m ²)	Estimated Total Costs (€)	
1	Roof Upgrade	15 - 20	€ 1,402	
2	Cavity Wall upgrade	7 - 10	€ 0	
3	Wall Insulation	90-140	€ 0	
4	Window/Door upgrade	250 - 350	€ 0	
5	Lighting	20/fitting	€ 560	
6	Heating Upgrade (Water)	270L (System)	€ 4,250	
7	Heating Upgrade (Primary)	3,000 (System)	€ 3,000	
8	Solar PV	7,000 (3.7 kWp System)	€ 7,000	
9	Demand Controlled Ventilation	3,200 (System)	€ 0	
10	0	0	€ 0	
Total			€ 16,212	
Estimated Total Cost to Homeowner including Individual SEAI Grants			€ 12,612	
Savings Summary				
BER Rating	Energy Savings (kWh/m ² /yr)	Energy Savings (kWh/yr)	Cost Savings (€/yr)	Simple Payback, including Grant Funding (years)
B2	134.05	18,649	€ 1,678	8

Audit site visit completed on 28.05.21, Audit report edited on 02.06.21