

## ENERGY AUDIT REPORT

House No. 8 - Semi Detached House - 1970 - Hollow Block Construction - 150.27m<sup>2</sup> (1617ft<sup>2</sup>)



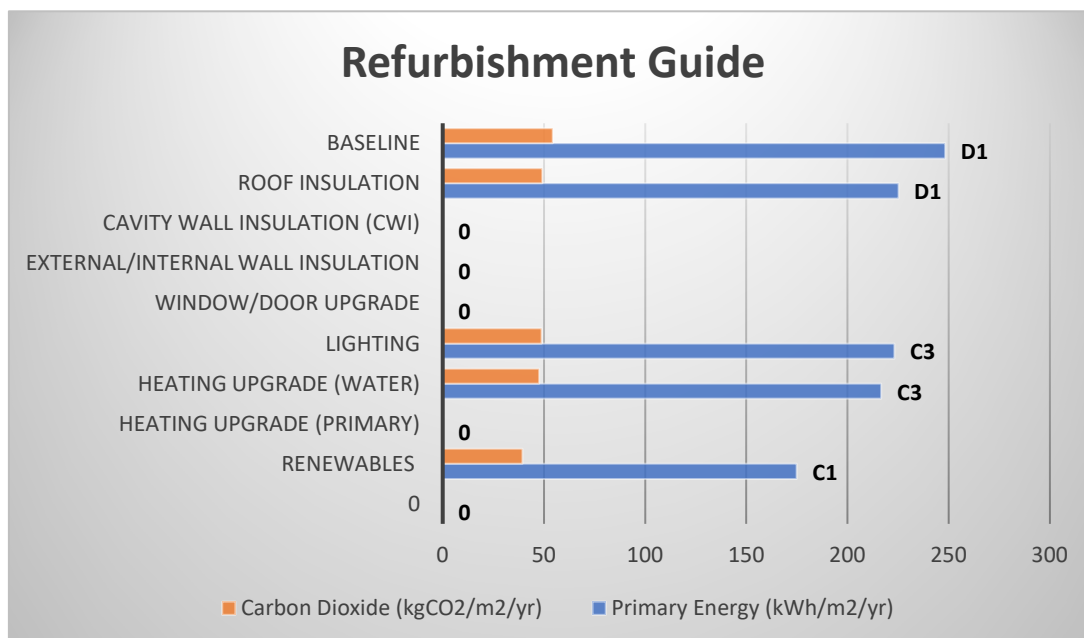
Greystones/Delgany, County Wicklow

Existing Building Details			
Building Elements		Insulation Thickness (mm)	U-Value (W/m <sup>2</sup> .K)
Walls	Other	N/A	2.1
Roof	Pitched Roof insulated at ceiling	100mm-150mm	0.26 - 2.3
Floor	Suspended Floor	Unknown	0.56
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 Combi boiler, primary pipework uninsulated	Mains Gas	91%
Secondary Heating System	Open fire	Mains Gas	30%
Domestic Hot Water	Heated with Primary heating system		
Cylinder	None - Combi boiler		
Controls	Programmer , 2x stats and TRV's		

Domestic Retrofit Guidelines (Step by Step)			Energy Consumption (kWh/m <sup>2</sup> /yr)	Carbon Emissions (CO <sub>2</sub> ) (kgCO <sub>2</sub> /m <sup>2</sup> /yr)	Building Energy Rating (BER)	
Energy Efficient Measures			Target U-Value (W/m <sup>2</sup> .K)	Current Usage (248.27)	Current Emissions (54.33)	Current BER (D1)
1	Roof insulation	Loftwool Insulation top-up to achieve minimum 300mm across all roof area.	0.13	225.15	49.17	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	223.15	48.83	C3
6	Heating Upgrade (Water)	Install Kronotherm HP	N/A	216.7	47.69	C3
7	Heating Upgrade (Primary)	Air to water heat pump, 6-8kW, two separate heating zones and controller.	N/A			
8	Renewables	Install 3.7 kWp Solar PV system	N/A	174.87	39.46	C1
9						

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Estimated Costs Summary				
Measures		Estimated Costs (€/m <sup>2</sup> )	Estimated Total Costs (€)	
1	Roof Upgrade	15 - 20	€ 1,765	
2	Cavity Wall upgrade	7 - 10	€ 0	
3	Wall Insulation	90-140	€ 0	
4	Window/Door upgrade	250 - 350	€ 0	
5	Lighting	20/fitting	€ 540	
6	Heating Upgrade (Water)	270L (System)	€ 4,250	
7	Heating Upgrade (Primary)	12,500 (System)	€ 0	
8	Solar PV	7,000 (1.2 kWp System)	€ 7,000	
9	Demand Controlled Ventilation	3,200 (System)	€ 0	
10	0	0	€ 0	
<b>Total</b>			<b>€ 13,555</b>	
<b>Estimated Total Cost to Homeowner including Individual SEAI Grants</b>			<b>€ 10,155</b>	
Savings Summary				
BER Rating	Energy Savings (kWh/m <sup>2</sup> /yr)	Energy Savings (kWh/yr)	Cost Savings (€/yr)	Simple Payback, including 35% Grant Funding (years)
C1	73.4	11,030	€ 993	10

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