

## ENERGY AUDIT REPORT

House No. 4 - Detached House - 1998 - Hollow Block Construction - 139.12m<sup>2</sup> (1500ft<sup>2</sup>)



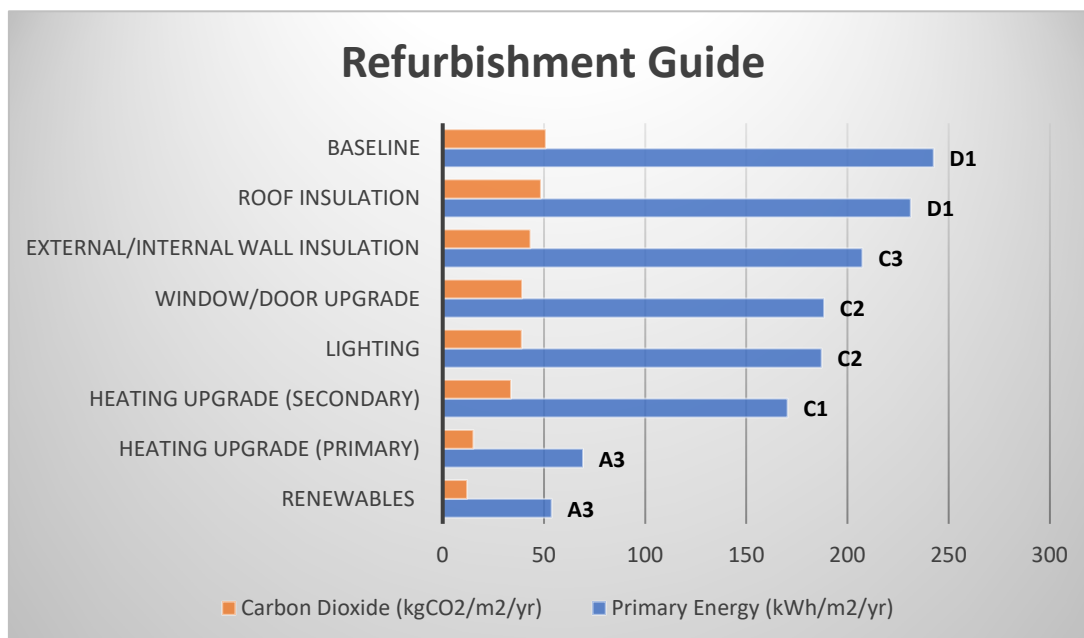
Greystones/Delgany, County Wicklow

Existing Building Details			
Building Elements		Insulation Thickness (mm)	U-Value (W/m <sup>2</sup> .K)
Walls	Other	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 <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 (242.54)	Current Emissions (50.89)	Current BER (D1)
Roof insulation	Loftwool Insulation top-up to achieve minimum 300mm across all roof area.	0.13	231.33	48.47	D1	
External/Internal Wall Insulation	Install Wall Insulation (internal or External), thickness -100mm	0.3	207.37	43.31	C3	
Window/Door Upgrade	Replace existing glazing with Double/Triple glazed,(low E) units	1.2	188.37	39.21	C2	
Lighting	Install energy efficient light bulbs (LEDs)	N/A	187.21	39	C2	
Heating Upgrade (secondary)	Install a closed stove	N/A	170.34	33.78	C1	
Heating Upgrade (Primary)	Air to water heat pump, 6-8kW, two separate heating zones and controller.	N/A	69.25	15.12	A3	
Renewables	Install 1.2 kWp Solar PV system	N/A	53.84	12.09	A3	

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Estimated Costs Summary		
Measures	Estimated Costs (€/m <sup>2</sup> )	Estimated Total Costs (€)
Roof Upgrade	15 - 20	€ 1,402
Wall Insulation	90-140	€ 21,666
Window/Door upgrade	250 - 350	€ 8,862
Lighting	20/fitting	€ 560
Heating Upgrade (Secondary)	3,500 (System)	€ 3,500
Heating Upgrade (Primary)	12,500 (System)	€ 12,500
Solar PV	2,400 (1.2 kWp System)	€ 2,400
0	0	€ 0
<b>Total</b>		<b>€ 50,891</b>
<b>Total Cost to Homeowner including One Stop Shop Grant</b>		<b>€ 31,191</b>

Savings Summary				
BER Rating	Energy Savings (kWh/m <sup>2</sup> /yr)	Energy Savings (kWh/yr)	Cost Savings (€/yr)	Simple Payback, including Grant Funding (years)
A3	188.7	26,252	€ 2,363	13

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