

ENERGY AUDIT REPORT

House No. 2 - End of terrace House - 2005 - Timber Frame Construction - 106.62m² (1150ft²)



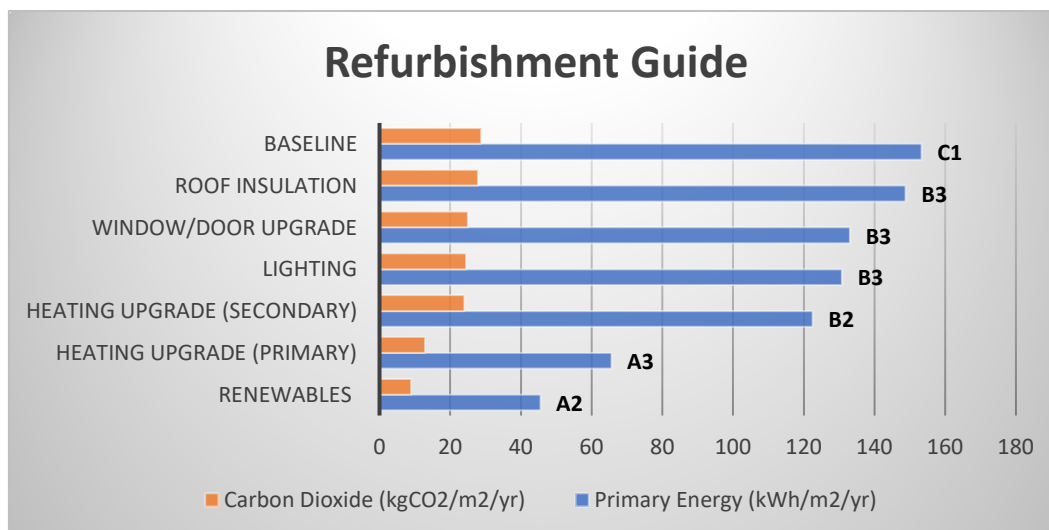
Greystones/Delgany, County Wicklow

Existing Building Details			
Building Elements		Insulation Thickness (mm)	U-Value (W/m ² .K)
Walls	Timber Frame	100mm-150mm	0.37
Roof	Pitched Roof insulated at ceiling	100mm-150mm	0.26
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	90%
Secondary Heating System	Closed fronted gas fire	Mains Gas	40%
Domestic Hot Water	Heated with Primary heating system & Electric immersion		
Cylinder	Cylinder with factory fitted insulation (30mm)		
Controls	Programmer & Thermostat		

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 (153.29)	Current Emissions (28.68)	Current BER (C1)
Roof insulation	Loftwool Insulation top-up to achieve minimum 300mm across all roof area.	0.13	148.79	27.85	B3	
Window/Door Upgrade	Replace existing glazing with Double/Triple glazed,(low E) units	1.2	133.02	24.94	B3	
Lighting	Install energy efficient light bulbs (LEDs)	N/A	130.77	24.48	B3	
Heating Upgrade (secondary)	Remove existing gas fire	N/A	122.49	23.95	B2	
Heating Upgrade (Primary)	Air to water heat pump, 4-6kW, two separate heating zones and controller.	N/A	65.64	12.91	A3	
Renewables	Install 1.2 kWp Solar PV system	N/A	45.53	8.95	A2	

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Estimated Costs Summary		
Measures	Estimated Costs (€/m ²)	Estimated Total Costs (€)
Roof Upgrade	15 - 20	€ 1,215
Window/Door upgrade	250 - 350	€ 6,399
Lighting	20/fitting	€ 700
Heating Upgrade (Primary)	12,500 (System)	€ 12,500
Solar PV	2,400 (1.2 kWp System)	€ 2,400
Total		€ 23,214
Total Cost to Homeowner including One Stop Shop Grant		€ 8,814

Savings Summary				
BER Rating	Energy Savings (kWh/m ² /yr)	Energy Savings (kWh/yr)	Cost Savings (€/yr)	Simple Payback, including Grant Funding (years)
A2	107.76	11,489	€ 1,034	9

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