

ENERGY AUDIT REPORT

House No. 3 - Semi Detached House - 1980 - Unkown Block Construction - 125.39m² (1350ft²)



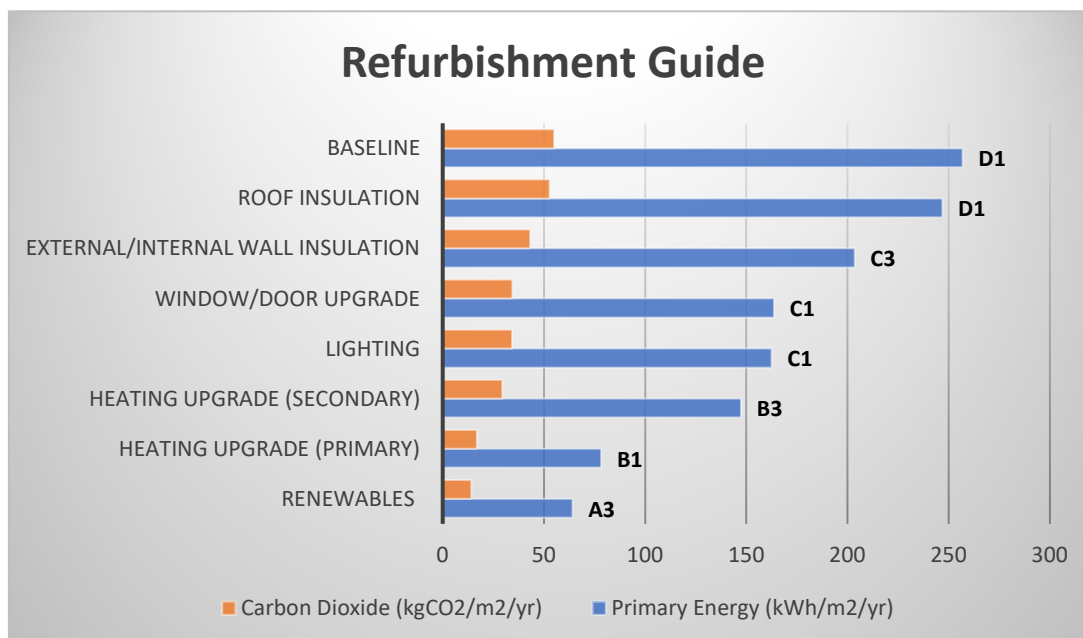
Greystones/Delgany, County Wicklow

Existing Building Details			
Building Elements		Insulation Thickness (mm)	U-Value (W/m ² .K)
Walls	Other	50mm	1.1
Roof	Pitched Roof insulated at ceiling	50mm-100mm	0.4
Floor	Solid Floor	Unknown	0.64
Windows	Single Glazed	N/A	4.8
Doors	Glazed Door	N/A	3

Existing Heating Characteristics			
Heating System		Energy	Efficiency (%)
Primary Heating System	Gas boiler, primary pipework uninsulated	Mains Gas	91%
Secondary Heating System	Open fire	Multi fuel	30%
Domestic Hot Water	Heated with Primary heating system & Electric immersion		
Cylinder	Cylinder with loose jacket (50mm)		
Controls	Time clock only, room 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 (256.9)	Current Emissions (55.01)	Current BER (D1)
1	Roof insulation	Loftwool Insulation top-up to achieve minimum 300mm across all roof area.	0.13	246.87	52.79	D1
2	External/Internal Wall Insulation	Install Wall Insulation (internal or External), thickness -100mm	0.3	203.53	43.19	C3
3	Window/Door Upgrade	Replace existing glazing with Double/Triple glazed,(low E) units	1.2	163.68	34.37	C1
4	Lighting	Install energy efficient light bulbs (LEDs)	N/A	162.49	34.16	C1
5	Heating Upgrade (secondary)	Install wood burning stove	N/A	147.31	29.4	B3
6	Heating Upgrade (Primary)	Air to water heat pump, 4-6kW, two separate heating zones and controller.	N/A	78.25	16.96	B1
7	Renewables	Install 1.2 kWp Solar PV system	N/A	64.14	14.18	A3

ENERGY AUDIT REPORT



Estimated Costs Summary		
Measures	Estimated Costs (€/m ²)	Estimated Total Costs (€)
1 Roof Upgrade	15 - 20	€ 1,366
2 Wall Insulation	90-140	€ 15,917
3 Window/Door upgrade	250 - 350	€ 6,981
4 Lighting	20/fitting	€ 420
5 Heating Upgrade (Secondary)	3,500 (System)	€ 3,500
6 Heating Upgrade (Primary)	12,500 (System)	€ 12,500
7 Solar PV	2,400 (1.2 kWp System)	€ 2,400
Total		€ 43,083
Total Cost to Homeowner including One Stop Shop Grant		€ 27,883

Savings Summary				
BER Rating	Energy Savings (kWh/m ² /yr)	Energy Savings (kWh/yr)	Cost Savings (€/yr)	Simple Payback, including Grant Funding (years)
A3	192.76	13,162	€ 1,185	24

Audit site visit completed on 10.12.20, Audit report edited on 08.01.21