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ENERGY AUDIT REPORT

Semi Detached Home – 1940 – Mass Concrete – 100.08m²
Current BER – E2 – Energy Use 371.82 kWh/m²/yr – Total Energy Use: 37,212 kWh/yr



Existing Building Details			
Building Elements		U-Value (W/m ² .K)	Heat Loss (AU) [W/K]
Walls	Solid Mass Concrete	2.20	118.93
Walls	Extension 300mm Cavity	0.60	6.88
Roof	Pitched Roof – Insulated on Ceiling	2.30	100.49
Roof	Extension Pitched Roof – Insulated on Rafter	0.49	4.29
Ground Floor	Solid Floor	0.27	12.53
Ground Floor	Extension	0.79	7.88
First Floor	Non-Heat Loss Floor	0	0
Windows	Double-Glazed Air-filled X 4	3.10	400.79
Window	Single-glazed	4.80	

Existing Heating Characteristics			
Heating System		Energy	Efficiency (%)
Primary Heating System	Oil boiler, primary pipework insulated	Oil	85.5%
Secondary Heating System	Open Fire	Manufactured Smokeless Fuel	
Domestic Hot Water	Heated with Primary heating system and immersion	Oil	85.5%
Cylinder	Cylinder with manufactured jacket (30mm)		
Controls	Radiator Controls		

Domestic Retrofit Guidelines (Step by Step)						
Proposed Interventions		Energy saving (kWh/m ² /yr)	Revised energy rating (kWh/m ² /yr)	Revised BER Rating	Annual energy saving (kWh/yr)	CO ₂ savings/yr (kg)
1	Upgrade Existing Windows to Achieve Minimum U-Value of ≤ 0.73 W/m ² K	27.87	343.95	E2	2,789.23	683
2	Install 300mm Insulation on original flat ceiling	84.75	259.20	D1	8,481.78	2078
3	Upgrade Existing Sloped Ceiling to Achieve Minimum U-Value of ≤ 0.19 W/m ² K	2.44	256.76	D1	244.20	60
4	Upgrade Original Wall to Achieve Minimum U-Value of ≤ 0.24 W/ m ² K	101.04	155.72	C1	10,112.08	2477
5	Upgrade Extension Wall to Achieve Minimum U-Value of ≤ 0.21 W/ m ² K	7.17	148.55	B3	717.57	176
6	Block Existing Chimneys	26.16	122.39	B2	2,618	641
7	Install Air To Water Heat Pump (HP) - Upgrade Heating Controls & Hot Water to Full Time & Temperature Control	99.98	55.74	A3	10,006	2451
8	Install 2kW Photovoltaic system	33	22.74	A1	3,302.64	809
	Overall kWh/m ² /yr Savings Potential	382.41				
	Heat Loss Indicator post works (HLI)	1.35	W/K			
	BER Uplift	349.08	kWh/m ² /yr,			

*Upgrades 1-5 are required before a Heat Pump (HP) can be installed. The Heat Loss Indicator must be ≤ 2 to qualify for grant assistance for HP installation

Estimated Costs Summary			
Measures		Estimated Costs (€/m ²)/Unit	Estimated Total Costs (€)
1	Windows Upgrade	€495.00	€9,900.00
2/3	Roof Insulation Upgrade	-	€2,562.50
4/5	Wall Insulation Upgrade	-	€13,175.00
6	Block existing Chimneys	-	Included below
7*	Heating Upgrade (Primary)	(System)	€17,600.00
8	Install 2kW PV system	2KW (System)	€5,500.00
Total to achieve A2			€48,737.50
VAT @ 13.5%			€6,579.56
Subtotal			€55,317.06
PM Fee			€3,411.63
Total Build Costs			€58,728.69
ESTIMATED SEAI Grant @ 30% for participation in BEC Scheme			€17,329.07
Value of Energy Credits			€1,981.00
Total Cost to Homeowner including 30% Grant funding and Energy Credits			€39,418.62

*Minimum uplift required from Better Energy Community Grant Scheme

Savings Summary					
BER Rating	Energy Use (kWh/m ² /yr)	Energy Savings (kWh/yr)	Cost Savings (€/yr)*	Simple Payback, including Grant Funding (years)	CO2 Savings (kg)
Current E2	371.82		0.00	-	
A1	22.74	34,936	3,203.63	12.3	8,559

*Based on Home Heating oil replacement @€0.0917/kWh