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ENERGY AUDIT REPORT

Semi-Detached 2-Storey Dwelling– 1985 – Cavity Block – Area 82.44 m²
Current BER – C2 – Energy Use 184.45 kWh/m²/yr – Total Energy Use: 15,206 kWh/yr



Existing Building Details			
Building Elements		U-Value (W/m ² .K)	Heat Loss (AU) [W/K]
Walls	300mm Filled Cavity	0.33	25.67
Roof	Pitched Roof – Insulated on Ceiling 400mm Mineral Fibre	0.12	4.95
Ground Floor	Solid	0.57	23.50
1st Floor	Non-Heat Loss Floor	0	0
Windows	Double-glazed Air-Filled X 3	2.70	13.60
Door	Solid Exposed Door	3.00	5.46

Existing Heating Characteristics			
Heating System		Energy	Efficiency (%)
Primary Heating System	Oil Fired Boiler, primary pipework uninsulated	Oil	73%
Secondary Heating System	None		
Domestic Hot Water	Heated with Primary heating system and immersion	Oil	73%
Cylinder	Cylinder Factory Insulated 25mm		
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	Tidy and Even Out Attic Insulation out to Eaves and Across Wall Plate	0.00	184.45	C2	0.00	0.00
2	Install Full Time and Temperature Space Heating Zone Control	21.98	162.47	C1	1,812.03	443.95
3	Install Full Domestic Hot Water Time and Temperature Control	22.22	140.25	B3	1,831.82	448.80
4	Install New Insulated Hot Water Storage with 50mm insulation	5.50	134.75	B3	453.42	111.09
5	Install Hit and Miss Room Ventilation or MEV (Mechanical Extract Ventilation). MEV Ventilation May Push the HLI above the 2.00W/k Target. Resulting in the Need for an Air Leakage Test with a Result of ≤ 10m ³ /hr/m ² or better.	0.00	134.75	B3	0.00	0.00
6	Install Air To Water Heat Pump (HP) - Upgrade Heating Controls & Hot Water to Full Time & Temperature Control	56.63	77.65	B1	4,668.58	1,143.80
7	Install 3kW Photovoltaic system	59.35	18.30	A1	4,892.81	1,198.74
Overall kWh/m ² /yr Savings Potential		166.15		Total kg CO ₂ Saved/yr		3,346.37

Heat Loss Indicator post works (HLI)	1.97	W/K			
BER Uplift (with PV)	166.15	kWh/m ² /yr,			

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 Servicing	€0.00	
2-6	Heating and Ventilation Upgrade	(System)	€17,600.00
5	Install 2kW PV system	2KW (System)	€7,000.00
Total to achieve A1			€24,600
VAT @ 13.5%			€3321
Subtotal			€27,921
PM Fee			€1,954.47
Total Build Costs			€29,875.47
ESTIMATED SEAI Grant @ 30% for participation in BEC Scheme			€8,962.64
Value of Energy Credits			€1,131.00
Total Cost to Homeowner including 30% Grant funding and Energy Credits			€19,781.83

*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 C2	184.45	()	0.00	-	
A1	18.30	13,697.35	€1,256.05	15.7	3,346.37

*Based on Home Heating Oil cost replacement @€0.0917/kWh

As a guide: a ten-year-old evergreen tree absorbs approximately 14 kg of carbon dioxide per year, so the carbon reduction for these works is the equivalent of **239 evergreen trees.