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ENERGY AUDIT REPORT

End of Terrace – 1984 - Unknown wall construction – 80.28m²
Current BER – C3 – Energy Use 212.52 kWh/m²/yr – Total Energy Use: 13,978 kWh/yr



Existing Building Details			
Building Elements		U-Value (W/m ² .K)	Heat Loss (AU) [W/K]
Walls	Unknown	0.60	46.51
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Roof	1 st Fl Pitched Roof insulated at ceiling	0.26	10.38
Roof	Ground Fl Pitched Roof insulated at ceiling	0.49	0.28
Ground Floor	Solid Floor	0.64	25.88
First Floor	Non-Heat Loss Floor	0.00	0.00
Windows	Double Glazed Air filled	3.10	2.51
Doors	Solid Exposed Doors (2)	3	5.31
Door	Solid semi-exposed door Between house and unheated space	1.71	5.16

Existing Heating Characteristics			
Heating System		Energy	Efficiency (%)
Primary Heating System	Oil boiler, primary pipework insulated	Oil	95%
Secondary Heating System	None		
Domestic Hot Water	Heated with Primary heating system and immersion	Oil	95%
Cylinder	Cylinder with manufactured jacket (30mm)		
Controls	Time clock only, No thermostat		

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)	CO2 savings/yr (kg)
1	Upgrade Existing Windows to Achieve Minimum U-Value of ≤ 0.73 W/m ² K	13.28	199.24	C2	1066.12	261
2	Upgrade Existing Doors to Achieve Minimum U-Value of ≤ 1.40 W/m ² K	5.09	194.15	C2	408.63	100
3	Install 300mm Insulation on Original Flat Ceiling	4.68	189.47	C2	375.71	92
4	Block Existing Chimney	5.68	183.79	C2	455.99	112
5*	Upgrade Wall to Achieve Minimum U-Value of ≤ 0.20 W/m ² K	28.59	155.20	C1	2,295.21	562
6**	Install Air To Water Heat Pump (HP) - Upgrade Heating Controls & Hot Water to Full Time & Temperature Control	106.7	77.09	B1	8,565.88	2,099
7	Install 2kW Photovoltaic system	40.63	36.46	A2	3,261.78	799
	Overall kWh/m ² /yr Savings Potential	204.65				
	Heat Loss Indicator post works	1.65	W/K			
	BER Uplift	176.06	kWh/m ² /yr			

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

**Minimum uplift required from BEC

Estimated Costs Summary			
Measures		Estimated Costs (€/m ²)/Unit	Estimated Total Costs (€)
1	Windows Upgrade	10 - 15	€4,455.00
2	Doors Upgrade	7 - 10	€4,400.00
3	Ceiling Insulation	70-100	€922.50
4	Block Existing Chimney	80 - 100	€100.00
5	Wall upgrade	250 - 350	€17,945.00
6*	Heating Upgrade (Primary)	12,500 (System)	€18,700.00
7	Install 2kW PV system	2KW (System)	€5,500.00
Total to achieve A2			€51,922.50
VAT @ 13.5%			€7,009.54
Subtotal			€58,932.04
PM Fee 7%			€3,634.58
<u>Total Build Costs</u>			<u>€62,566.61</u>
SEAI Grant @ 30% for participation in BEC Scheme			€18,769.98
Value of Energy Credits			€1,886.00
<u>Total Cost to Homeowner including 30% Grant funding and Energy Credits</u>			<u>€41,910.63</u>

*Minimum uplift required from BEC

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 C3	212.52	(17,061)	0.00	-	
A2	36.46	14,134	1,371	30.5	3,463