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**ENERGY AUDIT REPORT**

**Mid Terrace Dwelling – 1973 – Cavity Block – 90.02 m<sup>2</sup>**  
**Current BER – D1 – Energy Use 230.77 kWh/m<sup>2</sup>/yr – Total Energy Use: 20,774 kWh/yr**



**Existing Building Details**

Building Elements		U-Value (W/m <sup>2</sup> .K)	Heat Loss (AU) [W/K]
Walls	300mm Filled Cavity	0.28	14.70
Wall	Extension Unknown	0.55	14.49
Roof	Pitched Roof – Insulated on Ceiling	0.26	11.70
Ground Floor	Solid	0.61	27.46
First Floor	Non-Heat Loss Floor	0	0
Door	Solid Exposed Door	3.00	5.13
Windows	Double-glazed Air-Filled	3.10	181.09

Existing Heating Characteristics			
Heating System		Energy	Efficiency (%)
Primary Heating System	Non - Condensing Oil Boiler, primary pipework insulated	Oil	85%
Secondary Heating System	Open Fire	Manufactured Smokeless Fuel	
Domestic Hot Water	Heated with Primary heating system and immersion	Oil	85%
Cylinder	Cylinder with loose jacket (30mm)		
Controls	Radiator Controls		

Domestic Retrofit Guidelines (Step by Step)						
Proposed Interventions		Energy saving (kWh/m2/yr)	Revised energy rating (kWh/m2/yr)	Revised BER Rating	Annual energy saving (kWh/yr)	CO2 savings/yr (kg)
1	Upgrade Existing Windows to Achieve Minimum U-Value of $\leq 0.73$ W/ m <sup>2</sup> K	29.74	201.03	C3	2,677.19	656
2	Upgrade Existing Door to Achieve Minimum U-Value of $\leq 1.40$ W/m <sup>2</sup> K	2.73	198.30	C2	245.75	60
3	Instal 300mm Insulation on Flat Ceiling	5.79	192.51	C2	521.22	128
4	Upgrade Original Wall to Achieve Minimum U-Value of $\leq 0.27$ W/m <sup>2</sup> K	5.61	186.90	C2	505.01	124
5	Install Air To Water Heat Pump (HP) - Upgrade Heating Controls & Hot Water to Full Time & Temperature Control	108.18	78.72	B1	9,738.36	2386
6	Install 2kW Photovoltaic system	26.12	52.60	A3	2,351.32	576
	Overall kWh/m2/yr Savings Potential	178.17				
	Heat Loss Indicator post works (HLI)	1.48	W/K			
	BER Uplift	178.17	kWh/m2/yr,			

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

Estimated Costs Summary		
Measures	Estimated Costs (€/m <sup>2</sup> )/Unit	Estimated Total Costs (€)
1	Roof Upgrade	€1,035.00
2	Wall Upgrade	€11,680.00
3	Windows Upgrade	€8,415.00
4	Doors Upgrade	€2,200.00
5*	Heating Upgrade (Primary)	(System) €18,700.00
6	Install 2kW PV system	2KW (System) €5,500.00
<b>Total to achieve A3</b>		<b>€47,530.00</b>
<b>VAT @ 13.5%</b>		<b>€6,416.55</b>
<b>Subtotal</b>		<b>€53,946.55</b>
<b>PM Fee</b>		<b>€3,327.10</b>
<b><u>Total Build Costs</u></b>		<b><u>€57,273.65</u></b>
<b>ESTIMATED SEAI Grant @ 30% for participation in BEC Scheme</b>		<b>€17,182.10</b>
<b>Value of Energy Credits</b>		<b>€1,851.00</b>
<b><u>Total Cost to Homeowner including 30% Grant funding and Energy Credits</u></b>		<b><u>€38,240.56</u></b>

\*Minimum uplift required from Better Energy Community Grant Scheme

Savings Summary					
BER Rating	Energy Use (kWh/m <sup>2</sup> /yr)	Energy Savings (kWh/yr)	Cost Savings (€/yr)*	Simple Payback, including Grant Funding (years)	CO2 Savings (kg)
Current D1	<b>230.77</b>	()	0.00	-	
A3	52.60	16,039	€1,470.78	26	3,930

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