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ENERGY AUDIT REPORT

Mid Terraced Dwelling – 1932 –Cavity Block – 103.22 m²
Current BER – E1 – Energy Use 301.63 kWh/m²/yr – Total Energy Use: 31,135 kWh/yr



Existing Building Details

Building Elements		U-Value (W/m ² .K)	Heat Loss (AU) [W/K]
Walls	Unknown	2.10	186.88
Roof	Pitched Roof – Insulated on Ceiling	0.13	6.71
Ground Floor	Solid	0.73	7.12
Ground Floor	Suspended	0.65	27.20
First Floor	Non-Heat Loss Floor	0	0
Door	Solid Exposed Door – Front, Glazed	3.04	6.75
Door	Solid Exposed Door – Back, Glazed	3.04	5.20
Windows	Double-glazed Air-Filled	3.10	413.61
Windows	Double-glazed Air-Filled	3.10	Incl above

Heating System		Energy	Efficiency (%)
Primary Heating System	Non - Condensing Oil Boiler, primary pipework insulated	Oil	95%
Secondary Heating System	Open Fire	Manufactured Smokeless Fuel	
Domestic Hot Water	Heated with Primary heating system and immersion	Oil	95%
Cylinder	Cylinder with loose 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	Extension built on to rear of Dwelling - Fabric to Comply with 2019 Part L Building Regs	45.42	256.21	D1	4,688.25	1149
2	Upgrade Existing Windows to Achieve Minimum U-Value of ≤ 0.73 W/ m ² K	4.66	241.55	D1	1,513.21	371
3	Upgrade Existing Doors to Achieve Minimum U-Value of ≤ 1.40 W/m ² K	16.49	239.72	D1	1,702.10	417
4	Upgrade Original Wall to Achieve Minimum U-Value of ≤ 0.27 W/m ² K	84.75	154.97	C1	8,747.90	2143
5	Block Existing Chimneys & Install DCV Unit	0.97	154.00	C12	100.12	25
6	Install Air To Water Heat Pump (HP) - Upgrade Heating Controls & Hot Water to Full Time & Temperature Control	79.39	74.61	A3	8,194.64	2008
7	Install 2kW Photovoltaic system	25.14	49.47	A2	2,594.95	636
Overall kWh/m ² /yr Savings Potential		266.82				

	Heat Loss Indicator post works (HLI)	1.92	W/K			
	BER Uplift	252.16	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	Roof Upgrade	€1,170.00
2	Wall Upgrade	€17,600.00
3	Windows Upgrade	€8,910.00
4	Doors Upgrade	€4,400.00
5*	Heating Upgrade (Primary)	(System) €18,700.00
6	Install 2kW PV system	2KW (System) €5,500.00
Total to achieve A2		€56,280.00
VAT @ 13.5%		€7,597.80
Subtotal		€63,877.80
PM Fee		€3,939.60
<u>Total Build Costs</u>		<u>€67,817.40</u>
ESTIMATED SEAI Grant @ 30% for participation in BEC Scheme		€20,345.22
Value of Energy Credits		€1,981.00
<u>Total Cost to Homeowner including 30% Grant funding and Energy Credits</u>		<u>€45,491.18</u>

*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 E1	301.63	()	0.00	-	
A2	49.47	24,717	€2,692.04	20	6,749

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