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ENERGY AUDIT REPORT

Detached Home – 1973 –Cavity Block – 171.03m²
Current BER – D2 – Energy Use 261.66 kWh/m²/yr – Total Energy Use: 44,752kWh/yr



Existing Building Details

Building Elements		U-Value (W/m ² .K)	Heat Loss (AU) [W/K]
Walls	Original 300mm Filled Cavity	0.60	94.88
Walls	Extension 300mm Filled Cavity	0.60	9.80
Walls	Semi Exposed 100mm Block Wall adj unheated Circulation space	1.46	10.60
Wall	Unknown Exposed to Ground	2.10	2.84
Wall	Unknown Underside Bay Window	0.60	0.31
Roof	Pitched Roof – Insulated on Ceiling	0.13	8.89
Roof	Flat Roof	2.30	51.8
Roof	Pitched Roof – Insulated on Ceiling Extension	0.49	5.74
Roof	Flat Roof Extension	0.49	0.25
G Floor	Suspended Original	0.65	59.10
G Floor	Suspended Extension	0.68	7.96
1st Floor	Non-Heat Loss Floor	0	0
Doors	Solid Exposed Door – Side X 2	3.00	5.67
Windows	Double-glazed Air-Filled X 5	3.10	561.02
Window	Single Glazed	4.80	-

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 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	34.07	227.59	D1	5,826.99	1428
2	Upgrade Existing Doors to Achieve Minimum U-Value of ≤ 1.40 W/m ² K	2.75	224.84	C3	470.33	115
3	Upgrade Existing Flat Roof to Achieve Minimum U-Value of ≤ 0.25 W/m ² K	21.33	203.51	C3	3,648.07	894
4	Block Existing Chimney	27.75	175.76	C3	4,746.08	1163
5	Upgrade Original & Extension Cavity Wall to Achieve Minimum U-Value of ≤ 0.23 W/ m ² K	25.76	150.00	B3	4,405.73	1079
6	Upgrade Wall Exposed to Boilerhouse to Achieve Minimum U-Value of ≤ 0.23 W/m ² K	10.03	139.97	B3	1,715.43	420
7	Install Air To Water Heat Pump (HP) - Upgrade Heating Controls & Hot Water to Full Time & Temperature Control	117.16	58.60	A3	20,037.87	4909
8	Install 2kW Photovoltaic system	23.41	35.19	A2	4,003.81	981
	Overall kWh/m ² /yr Savings Potential	262.26				
	Heat Loss Indicator post works (HLI)	1.97	W/K			
	BER Uplift	226.47	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	€21,780.00
2	Doors Upgrade	€4,400.00
3	Flat Roof Upgrade	€3,680.00
4	Block Existing Chimney	
5	Cavity Wall Upgrade	€28,405.30
6*	Heating Upgrade (Primary)	(System) €17,600.00
7	Install 2kW PV system	2KW (System) €5,500.00
Total to achieve A2		€81,365.30
VAT @ 13.5%		€10,577.49
Subtotal		€91,942.79
PM Fee		€6,436.00
Total Build Costs		€98,378.78
ESTIMATED SEAI Grant @ 30% for participation in BEC Scheme		€29,513.64
Value of Energy Credits		€1,981.00
Total Cost to Homeowner including 30% Grant funding and Energy Credits		€66,884.15

*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 D2	261.66	()	0.00	-	
A3	35.19	30,087	€3,551.82	18.8	7371

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