



# BER Improvement Report

Sample 1970's Semi-Detached House in Beaumont, Dublin 9

Listed are some of the changes that can be made to improve the BER rating of this house from **BER G** to **BER A2**

Recommendation	Previous Energy Rating	New Energy Rating	Energy Improvement
<b>Roof</b> Add 100mm rockwool or equivalent between the joists and 200mm over the joists. Draught strip the attic hatch. <i>(SEAI Grants Available – T&amp;Cs Apply)</i>	<b>BER G</b> 525.58 kWh/m <sup>2</sup> /yr	<b>BER F</b> 438.43 kWh/m <sup>2</sup> /yr	87.15 kWh/m <sup>2</sup> /yr
<b>External Walls</b> Pump the cavity walls with platinum bead insulation. <i>(SEAI Grants Available – T&amp;Cs Apply)</i>	<b>BER F</b> 438.43 kWh/m <sup>2</sup> /yr	<b>BER D2</b> 277.95 kWh/m <sup>2</sup> /yr	160.48 kWh/m <sup>2</sup> /yr
<b>Windows &amp; Doors</b> Upgrade from aluminium single glazed windows and doors to argon filled double glazed uPVC.	<b>BER D2</b> 277.95 kWh/m <sup>2</sup> /yr	<b>BER D1</b> 236.45 kWh/m <sup>2</sup> /yr	41.50 kWh/m <sup>2</sup> /yr
<b>Hot Water Cylinder</b> Add a lagging jacket to the existing copper hot water cylinder or upgrade to a factory insulated cylinder.	<b>BER D1</b> 236.45 kWh/m <sup>2</sup> /yr	<b>BER C3</b> 202.90 kWh/m <sup>2</sup> /yr	33.55 kWh/m <sup>2</sup> /yr
<b>Heating Controls</b> Install smart heating controls and zone valves to control time and temperature heating for different zones of the house, including separate time and temperature control of hot water. <i>(SEAI Grants Available – T&amp;Cs Apply)</i>	<b>BER C3</b> 202.90 kWh/m <sup>2</sup> /yr	<b>BER C1</b> 163.27 kWh/m <sup>2</sup> /yr	39.63 kWh/m <sup>2</sup> /yr

<b>Open Fire</b> Install a wood burning stove in the fireplace with gross seasonal efficiency of 75% or greater.	<b>BER C1</b> 163.27 kWh/m <sup>2</sup> /yr	<b>BER B3</b> 145.88 kWh/m <sup>2</sup> /yr	<b>17.39</b> kWh/m <sup>2</sup> /yr
<b>Main Space Heating</b> Upgrade old non-condensing gas boiler to condensing boiler with seasonal efficiency of 90% or greater.	<b>BER B3</b> 145.88 kWh/m <sup>2</sup> /yr	<b>BER B2</b> 120.64 kWh/m <sup>2</sup> /yr	<b>25.24</b> kWh/m <sup>2</sup> /yr
<b>Solar Panels</b> Install 10 x 435W Solar PV panels to the rear of the house (south facing). <i>(SEAI Grants Available – T&amp;Cs Apply)</i>	<b>BER B2</b> 120.64 kWh/m <sup>2</sup> /yr	<b>BER A2</b> 46.48 kWh/m <sup>2</sup> /yr	<b>74.16</b> kWh/m <sup>2</sup> /yr
<b>Overall Improvement</b>		<b>BER A2</b> 46.48 kWh/m <sup>2</sup> /yr	<b>480.60</b> kWh/m <sup>2</sup> /yr