

Predicted Building Energy Rating (PBER)

Predicted BER for the Dwelling is:

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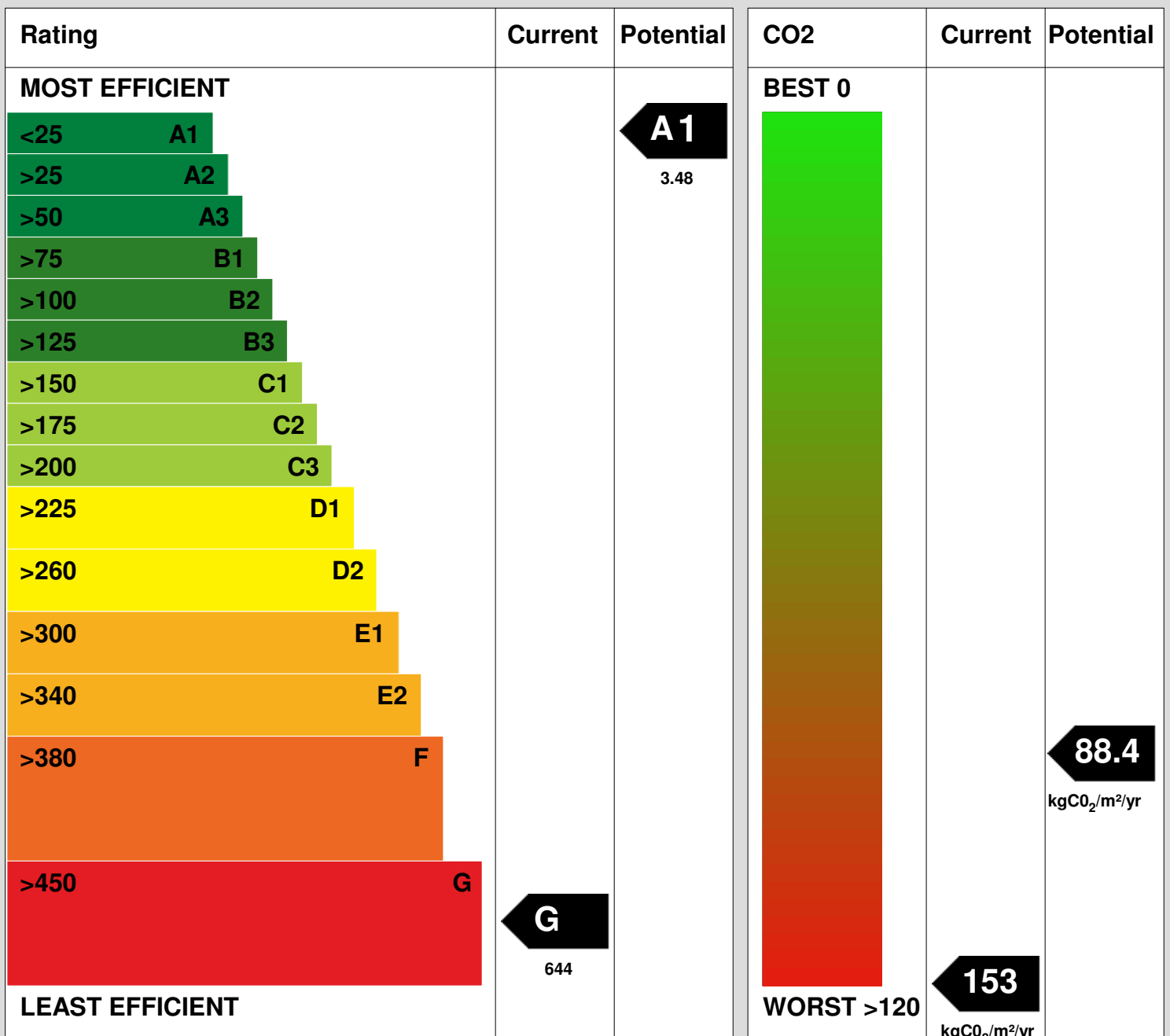
Address 2 High Street
Dublin
D2

Data of issue 22 August 2008
Assessed by Reginald James

The predicted energy ratings area an indication of the energy performance of the dwelling currently and after the possible improvements. It covers energy use for space heating, water heating, ventilation and lighting, calculated on the basis of standard occupancy. It is expressed as primary energy per unit floor area per year (kWh/m²/yr).

The predicted carbon dioxide emissions currently and after the possible improvements are expressed as kWh/m²/yr.

'A' rated properties are the most energy efficient and will tend to have the lowest energy bills.



N.B. This predicted BER is calculated on the basis of data provided by the assessor. A future BER for this dwelling may be different, as a result of changes to the dwelling or to the software used.

About this document

The Environmental Assessment Report for this dwelling was produced following an energy assessment undertaken by Reginald James

Assessor's name: Reginald James
Address: High Gables, Crawborough
Charlbury
OX7 3TX
Phone number:
Fax number:
E-mail address: regjames@rusfa.com
Related party disclosure:

About the building's performance ratings

The ratings on this report provide a measure of the building's overall energy efficiency and environmental impact, calculated in accordance with a national methodology that takes into account factors such as insulation, heating and hot water systems, ventilation and fuels used.

Not all buildings are used in the same way, so energy ratings use 'standard occupancy' assumptions which may be different from the specific way you use your building. Different method of calculation are used for homes and for other buildings.

Buildings that are more energy efficient use less energy, save money and help protect the environment. A building with a BER of less than 25 kWh/m²/yr would cost almost nothing to heat and light and would cause almost no carbon emissions. The potential ratings in the certificate describe how the performance of the dwelling could improve if all the suggested improvements were implemented.

About the impact of buildings on the environment

One of the biggest contributors to global warming is carbon dioxide. The way we use energy in buildings causes emissions of carbon. The energy we use for heating, lighting and power in homes produces over a quarter of the UK's carbon dioxide emissions and other buildings produce a further one-sixth.

The average household causes about 6 tonnes of carbon dioxide every year. Adopting the recommendations in this report can reduce emissions and protect the environment. You could reduce emissions even more by switching to renewable energy sources. In addition there are many simple everyday measures that will save money, improve comfort and reduce the impact on the environment. Some examples are given at the end of this report.

Recommended measures to improve this home's energy performance

2 High Street
Dublin
D2

Date of Certificate: 24 April 2009

Summary of this home's energy performance related issues

The following is an assessment of the key individual elements that have an impact on this home's performance rating. Each element is assessed against the following scale: Very poor / Poor / Average / Good / Very good.

Element	Description	Current performance	
		Energy efficiency	Environmental
Walls	Sandstone, as built, no insulation (assumed) Solid brick, as built, no insulation (assumed) Timber frame, as built, insulated (assumed)	Very poor Very poor Good	Very poor Very poor Good
Roofs	Pitched, 150 mm loft insulation Flat, insulated (assumed)	Good Average	Good Average
Floors	Suspended, no insulation (assumed)	-	-
Windows	Partial double glazing	Poor	Poor
Main heating	Electric storage heaters	Poor	Very poor
Main heating controls	Automatic charge control	Average	Average
Secondary heating	Room heaters, electric	-	-
Hot water	Electric immersion, off-peak	Poor	Very poor
Lighting	Low energy lighting in 10% of fixed outlets	Poor	Poor
Current primary energy use		644	
Current CO ₂ emissions		153	

Low and zero carbon energy sources

The following low or zero carbon energy sources are provided for this home:

- Solar photovoltaics

Recommendations

The measures below are cost effective. The performance ratings after improvement listed below are cumulative, that is they assume the improvements have been installed in the order that they appear in the table.

Lower cost measures (up to €500)	Typical savings per year	Performance ratings after improvement	
		Energy use	CO ₂ emissions
1 Low energy lighting for all fixed outlets	€ 37	642	153
Sub-total	€ 37		
Higher cost measures (over €500)			
2 Fan-assisted storage heaters	€ 173	607	144
Total	€ 210		
Potential primary energy use		607	
Potential CO₂ emissions			144

Further measures to achieve even higher standards

The further measures listed below should be considered in addition to those already specified if aiming for the highest possible standards for this home. However you should check the conditions in any covenants, planning conditions, warranties or sale contracts

3 Solar water heating	€ 56	582	138
4 Replace single glazed windows with low-E double glazing	€ 97	540	128
5 50 mm internal or external wall insulation	€ 349	406	93.1
6 Solar photovoltaics panels, 25% of roof area	€ 154	371	85.1
Enhanced primary energy use		607	
Enhanced CO₂ emissions			88.4

Improvements to the energy efficiency and environmental impact rating will usually be in step with each other. However, they can sometimes diverge because reduced energy costs are not always accompanied by a reduction in carbon dioxide (CO₂) emissions.

About the cost effective measures to improve this home's performance ratings

If you are a tenant, before undertaking any work you should check the terms of your lease and obtain approval from your landlord if the lease either requires it, or makes no express provision for such work.

Lower cost measures (typically under €500 each)

These measures are relatively inexpensive to install and are worth tackling first. Some of them may be installed as DIY projects. DIY is not always straightforward, and sometimes there are health and safety risks, so take advice before carrying out DIY improvements.

1 Low energy lighting

Replacement of traditional light bulbs with energy saving recommended ones will reduce lighting costs over the lifetime of the bulb, and they last up to 12 times longer than ordinary light bulbs. Also consider selecting low energy light fittings when redecorating; contact the Lighting Association for your nearest stockist of Domestic Energy Efficient Lighting Scheme fittings.

Higher cost measures (typically over €500 each)

2 Fan assisted storage heaters

Modern storage heaters are smaller and easier to control than the older type in the property. Ask for a quotation for new, fan-assisted heaters with automatic charge control. As installations should be in accordance with the current regulations covering electrical wiring, only a qualified electrician should carry out the installation. It is best to obtain advice from a qualified heating engineer.. Ask the engineer to explain the options which might also include switching to other forms of electric heating.

About the further measures to achieve even higher standards

Further measures that could deliver even higher standards for this home. You should check the conditions in any covenants, planning conditions, warranties or sale contracts before undertaking any of these measures. If you are a tenant, before undertaking any work you should check the terms of your lease and obtain approval from your landlord if the lease either requires it or makes no express provision for such work.

3 Solar water heating

A solar water heating panel, usually fixed to the roof, uses the sun to pre-heat the hot water supply. This will significantly reduce the demand on the heating system to provide hot water and hence save fuel and money. The Solar Trade Association has up-to-date information on local installers and any grant that may be available or contact the Energy Saving Trust.

4 Double glazing

Double glazing is the term given to a system where two panes of glass are made up into a sealed unit. Replacing existing single-glazed windows with double glazing will improve comfort in the home by reducing draughts and cold spots near windows. Double-glazed windows may also reduce noise, improve security and combat problems with condensation.

5 Internal or external wall insulation

Solid wall insulation involves adding a layer of insulation to either the inside or the outside surface of the external walls, which reduces heat loss and lowers fuel bills. As it is more expensive than cavity wall insulation it is only recommended for walls without a cavity, or where for technical reasons a cavity cannot be filled. Internal insulation, known as dry-lining, is where a layer of insulation is fixed to the inside surface of external walls; this type of insulation is best applied when rooms require redecorating and can be installed by a competent DIY enthusiast. External solid wall insulation is the application of an insulant and a weather-protective finish to the outside of the wall. This may improve the look of the home, particularly where existing brickwork or rendering is poor, and will provide long-lasting weather protection. Further information can be obtained from the National Insulation Association (www.nationalinsulationassociation.org.uk).

6 Solar photovoltaics (PV) panels

A solar PV system is one which converts light directly into electricity via panels placed on the roof with no waste and no emissions. This electricity is used throughout the home in the same way as the electricity purchased from an energy supplier. The British Photovoltaic Association has up-to-date information on local installers who are qualified electricians and any grant that may be available. It is best to obtain advice from a qualified electrician. Ask the electrician to explain the options.

What can I do today?

Actions that will save money and reduce the impact of your home on the environment include:

- Ensure that you understand the dwelling and how its energy systems are intended to work so as to obtain the maximum benefit in terms of reducing energy use and CO₂ emissions.
- Check that your heating system thermostat is not set too high (in a home, 21 °C in the living room is suggested) and use the timer to ensure you only heat the building when necessary.
- Make sure your hot water is not too hot. A cylinder thermostat need not normally be higher than 60 °C.
- Turn off lights when not needed and do not leave appliances on standby. Remember not to leave chargers (e.g. for mobile phones) turned on when you are not using them.
- Close your curtains at night to reduce heat escaping through the windows.
- If you are not filling up the washing machine, tumble dryer or dishwasher, use the half-load or economy programme. Minimise the use of tumble dryers and dry clothes outdoors where possible.