


# Energy Performance Certificate

Flat 2, 28 Grafton Road  
CHELTENHAM  
GL50 2DD

Dwelling type: Ground floor flat  
Date of assessment: 22 January 2008  
Date of certificate: 23 January 2008  
Reference number: 8018-6329-4110-8462-4026  
Total floor area: 24 m<sup>2</sup>


This home's performance is rated in terms of the energy use per square metre of floor area, energy efficiency based on fuel costs and environmental impact based on carbon dioxide (CO<sub>2</sub>) emissions.

## Energy Efficiency Rating

	Current	Potential
<i>Very energy efficient - lower running costs</i>		
(92 to 100) <b>A</b>		
(81 to 91) <b>B</b>		
(69 to 80) <b>C</b>		<b>71</b>
(55 to 68) <b>D</b>		
(39 to 54) <b>E</b>		
(21 to 38) <b>F</b>	<b>32</b>	
(1 to 20) <b>G</b>		
<i>Not energy efficient - higher running costs</i>		
<b>England &amp; Wales</b> EU Directive 2002/91/EC 		

The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating, the more energy efficient the home is and the lower the fuel bills will be.

## Environmental Impact (CO<sub>2</sub>) Rating

	Current	Potential
<i>Very environmentally friendly - lower CO<sub>2</sub> emissions</i>		
(92 to 100) <b>A</b>		
(81 to 91) <b>B</b>		
(69 to 80) <b>C</b>		
(55 to 68) <b>D</b>		<b>59</b>
(39 to 54) <b>E</b>	<b>51</b>	
(21 to 38) <b>F</b>		
(1 to 20) <b>G</b>		
<i>Not environmentally friendly - higher CO<sub>2</sub> emissions</i>		
<b>England &amp; Wales</b> EU Directive 2002/91/EC 		

The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO<sub>2</sub>) emissions. The higher the rating, the less impact it has on the environment.

## Estimated energy use, carbon dioxide (CO<sub>2</sub>) emissions and fuel costs of this home

	Current	Potential
Energy use	717 kWh/m <sup>2</sup> per year	593 kWh/m <sup>2</sup> per year
Carbon dioxide emissions	2.6 tonnes per year	2.1 tonnes per year
Lighting	£19 per year	£10 per year
Heating	£198 per year	£165 per year
Hot water	£332 per year	£69 per year

Based on standardised assumptions about occupancy, heating patterns and geographical location, the above table provides an indication of how much it will cost to provide lighting, heating and hot water to this home. The fuel costs only take into account the cost of fuel and not any associated service, maintenance or safety inspection. This certificate has been provided for comparative purposes only and enables one home to be compared with another. Always check the date the certificate was issued, because fuel prices can increase over time and energy saving recommendations will evolve.

To see how this home can achieve its potential rating please see the recommended measures.



Remember to look for the energy saving recommended logo when buying energy efficient products. It's a quick and easy way to identify the most energy efficient products on the market.

For advice on how to take action and to find out about offers available to help make your home more energy efficient call **0800 512 012** or visit **[www.energysavingtrust.org.uk/myhome](http://www.energysavingtrust.org.uk/myhome)**

## About this document

The Energy Performance Certificate for this dwelling was produced following an energy assessment undertaken by a qualified assessor, accredited by the NHER Accreditation Scheme, to a scheme authorised by the Government. This certificate was produced using the RdSAP 2005 assessment methodology and has been produced under the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007. A copy of the certificate has been lodged on a national register.

Assessor's accreditation number: SAVA001669  
Assessor's name: Mr James Connor  
Company name/trading name: Grosvenor Consultant Surveyors Ltd  
Address: 31 Imperial Square, Cheltenham, GL51 0JT  
Phone number: 01242 221162  
Fax number:  
E-mail address: jack@hippo.uk.net

## If you have a complaint or wish to confirm that the certificate is genuine

Details of the assessor and the relevant accreditation scheme are on the certificate. You can get contact details of the accreditation scheme from our website at [www.nher.co.uk](http://www.nher.co.uk) together with details of their procedures for confirming authenticity of a certificate and for making a complaint.

## About the building's performance ratings

The ratings on the certificate provide a measure of the building's overall energy efficiency and its 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. The average energy efficiency rating for a dwelling in England and Wales is band E (rating 46).

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 methods of calculation are used for homes and for other buildings. Details can be found at [www.communities.gov.uk/epbd](http://www.communities.gov.uk/epbd)

Buildings that are more energy efficient use less energy, save money and help protect the environment. A building with a rating of 100 would cost almost nothing to heat and light and would cause almost no carbon emissions. The potential ratings in the certificate describe how close this building could get to 100 if all the cost effective recommended 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 every day measures that will save money, improve comfort and reduce the impact on the environment, such as:

- 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 that 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.

**Visit the Government's website at [www.communities.gov.uk/epbd](http://www.communities.gov.uk/epbd) to:**

- Find out how to confirm the authenticity of an energy performance certificate
- Find how to make a complaint about a certificate or the assessor who produced it
- Learn more about the national register where this certificate has been lodged
- Learn more about energy efficiency and reducing energy consumption.

## Recommended measures to improve this home's energy performance

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### Summary of this home's energy performance related features

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	Solid brick, as built, no insulation (assumed)	Very poor	Very poor
Roofs	(another dwelling above)	-	-
Floor	Suspended, no insulation (assumed)	-	-
Windows	Partial double glazing	Poor	Poor
Main heating	Room heaters, electric	Very poor	Poor
Main heating controls	Appliance thermostats	Good	Good
Secondary heating	None	-	-
Hot water	Electric immersion, standard tariff	Very poor	Poor
Lighting	No low energy lighting	Very poor	Very poor
Current energy efficiency rating		F 32	
Current environmental impact (CO <sub>2</sub> ) rating		E 51	

## 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 improvements	
		Energy efficiency	Environmental impact
1 Increase hot water cylinder insulation to 160mm	£128	E 45	D 62
2 Low energy lighting for all fixed outlets	£5	E 46	D 62
Sub-total	£133		
Higher cost measures			
3 Fan-assisted storage heaters and dual immersion cylinder	£172	C 71	D 59
Total	£305		
<b>Potential energy efficiency rating</b>		<b>C 71</b>	
<b>Potential environmental impact (CO<sub>2</sub>) rating</b>			<b>D 59</b>

## 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.

Higher cost measures			
4 Replace single glazed windows with low-E double glazing	£29	C 76	D 64
5 50mm internal or external wall insulation	£28	C 80	C 70
<b>Enhanced energy efficiency rating</b>		<b>C 80</b>	
<b>Enhanced environmental impact (CO<sub>2</sub>) rating</b>			<b>C 70</b>

Improvements to the energy efficiency and environmental impact ratings 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 (CO<sub>2</sub>) emissions.

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

### Lower cost measures (typically up to £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 Hot water cylinder insulation

Increasing the thickness of existing insulation up to 160 mm around the hot water cylinder will help to maintain the water at the required temperature; this will reduce the amount of energy used and lower fuel bills. A cylinder jacket is a layer of insulation that is fitted around the hot water cylinder. The jacket should be fitted over the top of the existing insulation and over any thermostat clamped to the cylinder. Hot water pipes from the hot water cylinder should also be insulated, using pre-formed pipe insulation of up to 50 mm thickness, or to suit the space available, for as far as they can be accessed to reduce losses in summer. All these materials can be purchased from DIY stores and installed by a competent DIY enthusiast.

#### 2 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)

#### 3 Fan assisted storage heaters

Modern storage heaters are much less expensive to run than the direct acting, on-peak heating system in the property. A dual-rate electricity supply is required to provide the off-peak electricity that these heaters use; this is easily obtained by contacting the energy supplier. Ask for a quotation for fan-assisted heaters with automatic charge control. A dual-immersion cylinder, which can be installed at the same time, will provide cheaper hot water than the system currently installed.. As installations should be in accordance with the national wiring standards, only a qualified electrician should carry out the installation. Building Regulations apply to this work, so Building Control should be informed, unless the installer is registered with a competent persons scheme<sup>1</sup>, and can therefore self-certify the work for Building Regulation compliance. Ask a qualified electrical heating 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.

#### 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. Building Regulations apply to this work, so either use a contractor who is registered with a competent persons scheme<sup>1</sup> or obtain advice from your local authority building control department.

#### 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 relatively expensive 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. The External Wall Insulation Association keeps a register of professional installers. It should be noted that planning permission might be required.

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<sup>1</sup> For information on competent persons schemes enter "existing competent person schemes" into an internet search engine or contact your local Energy Saving Trust advice centre on 0800 512 012.