

# Section H: Energy Performance Certificate

## Save money, improve comfort and help the environment

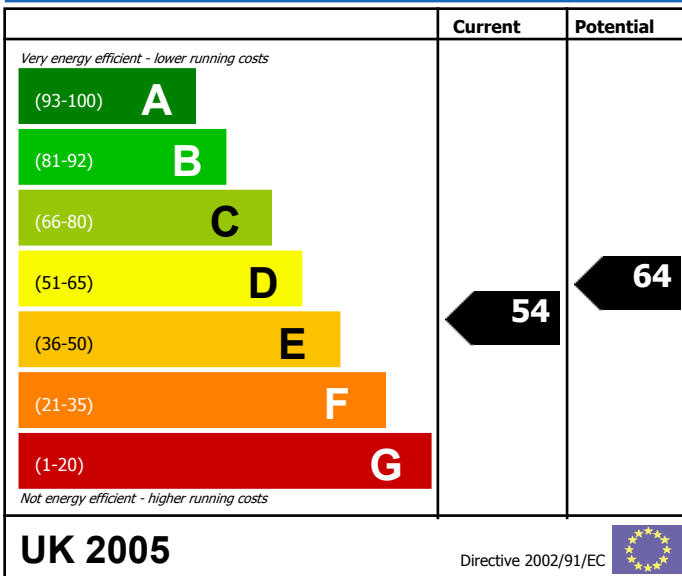
The following report is based on an inspection carried out for:

Address: 32 Frederick Street Bristol, BS4 3PP	Building type: Home	Certif. Number: 1327594
	Whole or part: Whole	Date issued: 7.1.2006
	Methodology: RDSAP	Inspector name: Trainee Assessor
	Inspection date: 07/01/2006	

### This home's performance ratings

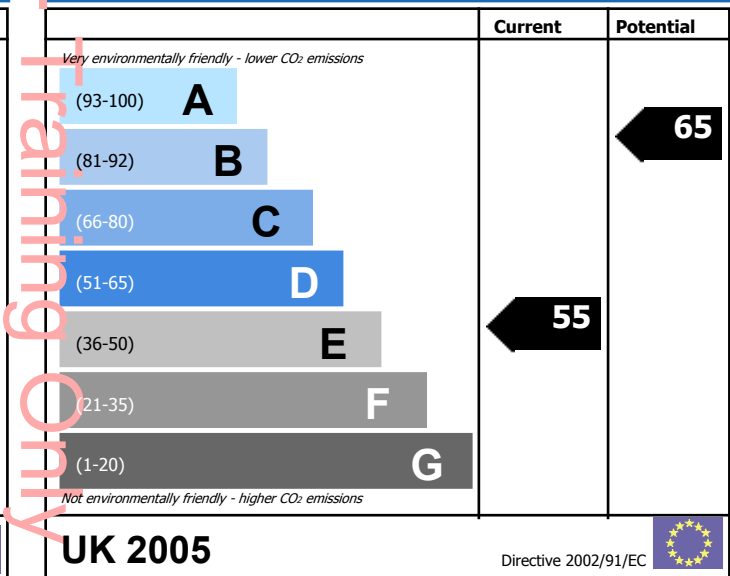
This home has been inspected and its performance rated in terms of its energy efficiency and environmental impact. This is calculated using the UK Standard Assessment Procedure (SAP) for dwellings which gives you an energy efficiency rating based on fuel cost and an environmental impact rating based on carbon dioxide (CO<sub>2</sub>) emissions.

### Energy Efficiency Rating



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 Rating



The environmental impact rating is a measure of this home's impact on the environment. The higher the rating the less impact it has on the environment.

### Typical fuel costs and carbon dioxide (CO<sub>2</sub>) emissions of this home

This table provides you with an indication of how much it will cost to provide lighting, heating and hot water to this home. The fuel costs and carbon dioxide emissions are calculated based on a SAP assessment of the actual energy use that would be needed to deliver the defined level of comfort in this home, using standard occupancy assumptions, which are described on page 4. The energy use includes the energy used in producing and delivering the fuels to this home. The fuel costs only take into account the

	Current	Potential
<b>Energy use</b>	<b>95 kWh/m<sup>2</sup> per year</b>	<b>74 kWh/m<sup>2</sup> per year</b>
<b>Carbon dioxide emissions</b>	<b>5.2 tonnes per year</b>	<b>4.1 tonnes per year</b>
<b>Lighting</b>	<b>£0 per year</b>	<b>£0 per year</b>
<b>Heating</b>	<b>£0 per year</b>	<b>£0 per year</b>
<b>Hot water</b>	<b>£0 per year</b>	<b>£0 per year</b>

To see how this home's performance ratings can be improved please go to page 2

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

The table shows the current performance of each element of this home on the following scale:

Extremely poor/ Very poor/ Poor/ Average/ Good/ Very good/ Excellent

Element	Description	Current performance
Main walls	SO Solid Brick:, Insulation: A As Built, Solid U: 2.10	???
Main roof	P Pitched, Insulation at: J Joists, Thickness: 100 mm	???
Main floor	U: 2.10 A: 44.71 m2	???
Windows	N Normal, Double Glazed: 0%	???
Main heating	BGA Post 98 Gas non-condens. (incl combis) with auto ign. F.A.F.	???
Main heating controls	CBF TRVs, program & bypass	???
Secondary heating	None	???
Hot water	HWP From the primary heating system	???
Lighting	Rooms: 8, L.E.L. Fittings: 0, External lights: None	???
<b>Current energy efficiency rating</b>		<b>D 54</b>
<b>Current environmental impact rating</b>		<b>E 50</b>

## Measures to improve this home's performance ratings

The improved energy ratings are cumulative, that is they assume the improvements have been installed in the order that they appear in the table.

Lower cost measures	Typical savings	Energy rating after improvement
Draughtproof all doors and windows	£11	D 55
Solid wall add 50mm (2 inches) insulation	£32	D 59
Sub Total	£43	
<b>Potential energy efficiency rating</b>		<b>D 59</b>
<b>Potential environmental impact rating</b>		<b>C 60</b>
<b>Further measures to achieve even higher standards</b>		
Double glaze the single glazed windows	£22	D 62
Install solar panel (3 m2)	£36	D 64
<b>Enhanced energy efficiency rating</b>		<b>D 64</b>
<b>Enhanced environmental impact rating</b>		<b>D 65</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 very occasionally not accompanied by reduced carbon dioxide emissions.

**For further information on how to take action and to find out about grants for making your home more**

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### Measures to reduce the running costs and improve this home's energy ratings

#### Lower cost measures (typically up to £500 each)

These improvements are relatively cheap to install and will be worth tackling first.

##### Measure 1

###### Cavity wall

The external walls of your home are built with a gap, called a cavity, between the inside and outside layers of the wall. Cavity wall insulation fills this gap with an insulating material. The material is pumped into the gap through small holes, which are drilled into the outside layer of the walls (the small holes are sealed up afterwards). Because this involves using specialist machinery, a professional installation company must carry out the work. The contractor will thoroughly survey your walls before commencing work to be sure that this type of insulation is right for your home, and provide a guarantee for the work.

##### Measure 2

###### Topping up loft insulation

The anticipated cost is based upon a contractor installing an additional 100mm of glass fibre or mineral wool insulation in your loft, but it can also be installed by a capable DIY enthusiast. If you choose a DIY installation then take care not to block ventilation at the edge of the loft space as this may cause condensation. When handling the insulation always wear gloves and

##### Measure 3

###### Hot water and pipe insulation

Improving the insulation of your hot water tank using a very thick jacket will help reduce your heating bills. You should also insulate the hot water pipe connections to the cylinder, for about a metre, or as far as you can get access to them. Fit the jacket over the top of any existing jacket and over any thermostat clamped to the cylinder.

#### Higher cost measures (typically up to £3000 each)

##### Measure 4

###### Condensing boiler

This improvement is most appropriate when your existing central heating boiler needs repair or replacement. A condensing boiler is capable of much higher efficiencies than other types of boiler, meaning it will burn less fuel to heat your property. Only a qualified heating engineer should carry out the installation. [Building Regulations apply to this work, so you should get advice

##### Measure 5

###### Installation of full controls package

Although your heating system already has a room thermostat, you can save more money by adding thermostatic radiator valves as well. They allow you to control the temperature of each room to suit your needs, adding to comfort and reducing your bills. For example, you can set them to be warmer in your living room and bathroom than in your bedrooms. You will need a plumber to fit them to every radiator except one - the radiator in the same room as your room thermostat. You still need the room thermostat, because without it, even when the TRVs have turned off the radiators, the boiler is still burning fuel and wasting your money - so

#### Further measures to achieve an even higher standard

These measures should be considered if aiming for the highest possible standard for this home.

##### Measure 6

###### Double glazing

Replacing the existing single glazed windows with double-glazing will improve your comfort in your home by reducing draughts and cold spots near windows. This will also help to save on your heating bills during the long winter months. Building Regulations apply to this work, so you should either use a contractor who is registered with Fensa or get advice from your local

##### Measure 7

###### Solar water heating

Energy from the sun can be harnessed to provide domestic hot water. These systems do not generally provide space heating, and are described as 'Solar Thermal' systems. They are among the most cost effective renewable energy systems that can be installed on dwellings in urban or rural environments.

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## About this energy inspection

Energy inspections are not new. They have been available in the UK since the late 1980's. Your inspection has been undertaken by a qualified inspector who has been trained to collect the correct information about the energy efficiency of your home. This information has been processed by a Government approved organisation to produce the energy rating and suggestions in the report. Both the inspector and the energy report supplier are regularly monitored to show that

*If you would like clarification of the technical information in this energy report please contact the:  
Inspector Trainee Assessor on \*\*\*\* \*\*\*\*\**

*Inspector Registration Number 4057-0001*

## About this home's performance ratings

The ratings provide you with a measure of the overall energy efficiency of this home and its environmental impact. Both are calculated using the Standard Assessment Procedure (SAP), which is the Government's recommended system of assessing the energy efficiency of dwellings. The ratings take into account the home's insulation, heating systems, hot water system, fixed lighting, ventilation, number of windows and related fuels.

Not all of us use our homes in the same way so to allow one home to be directly compared to another, energy ratings are calculated using 'standard occupancy' assumptions. Standard occupancy assumes that the house is heated for 9 hours a day during weekdays and 16 hours a day at weekends, with the living room heated to 21°C and the rest of the house at 18°C.

The ratings are expressed on a scale of 1 to 100. The higher the energy efficiency rating the more energy efficient the home and the higher the environmental impact rating the less impact it has on the environment.

Homes which are more energy efficient use less energy, saving money and helping to protect the environment. A home with an energy efficiency rating of 100 would be energy self sufficient and so the cost of providing lighting, heating and hot water would be practically zero.

The potential rating shown on page one is the economic potential of the home assuming all cost effective measures have

## This home's impact on the environment

Carbon dioxide is one of the biggest contributors to the man-made greenhouse effect. The energy we use to heat, light and power our homes produces 28 per cent of the UK's CO<sub>2</sub> emissions.

The average household in the UK creates about six tonnes of CO<sub>2</sub> every year. There are simple steps you can take to cut CO<sub>2</sub> emissions and help prevent climate change. Making your home more energy efficient by adopting the suggestions in this report can help protect the environment by saving CO<sub>2</sub>. You could save even more CO<sub>2</sub> by switching to renewable energy

## What can I do today?

In addition to the specific measures suggested in this report, don't forget there are many simple measures you can put into action today that will save you money and help reduce your impact on the environment.

For example:

- Check that your heating system thermostat is not set too high (21°C in the living room is suggested)
- Make sure your hot water is not too hot (60°C is suggested)
- Turn off your lights and domestic appliances when not needed, and do not leave TVs and videos on standby
- Do not overfill kettles and saucepans, and use a lid where possible
- Buy energy saving recommended appliances
- Find out if you are eligible for grants or offers to help with the cost of energy saving measures by visiting [www.est.org.uk/myhome](http://www.est.org.uk/myhome) or calling **0800 512 012**.

**For further information on how to take action and to find out about grants for making your home more**