

# Section H: Energy Performance Certificate

18, Hips way,  
Newport,  
Isle of Wight, po30 2HP

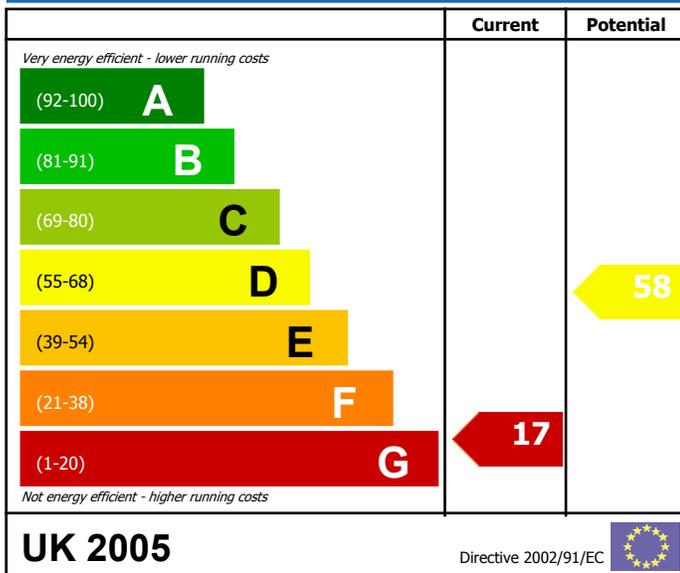
Dwelling type: Home  
Methodology: RDSAP  
Inspection date: 25/12/2006

Certif. Number: 01111112430  
Date issued: 25.12.2006  
Inspector name: Trainee Assessor

## This home's performance ratings

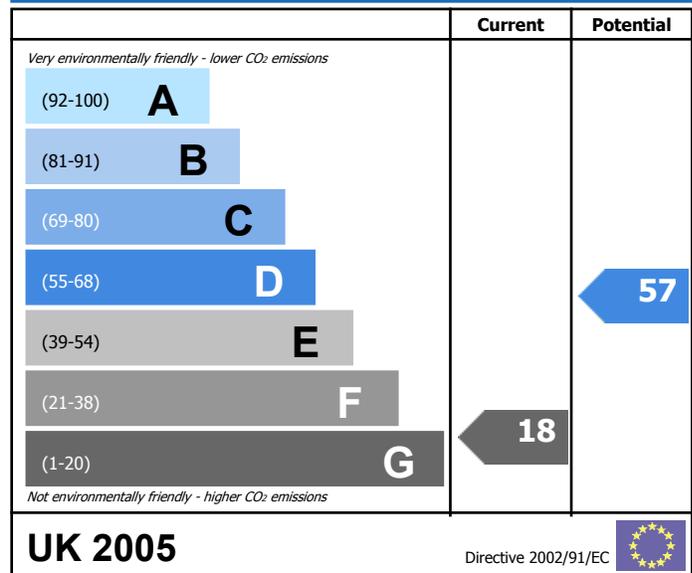
This home has been inspected and its performance rated in terms of its energy efficiency and environmental impact. This is calculated using the UK Standard Assessment Procedure (SAP) for dwellings which gives you an energy efficiency rating based on fuel cost and an environmental impact rating based 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 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 energy use. This makes standard assumptions about occupancy, heating patterns and geographical location. The energy use includes the energy used in producing and delivering the fuels to this home. The fuel costs only take into account the cost of fuel and not any associated service, maintenance or safety inspection costs. The costs have been provided for guidance only as it is unlikely they will match actual costs for any particular household.

To see how this home can achieve its potential rating please go to page 2

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	Current	Potential
<b>Energy use</b>	<b>31 666 kWh/m<sup>2</sup> per year</b>	<b>23 570 kWh/m<sup>2</sup> per year</b>
<b>Carbon dioxide emissions</b>	<b>13.4 tonnes per year</b>	<b>5.2 tonnes per year</b>
<b>Lighting</b>	<b>£80 per year</b>	<b>£80 per year</b>
<b>Heating</b>	<b>£992 per year</b>	<b>£400 per year</b>
<b>Hot water</b>	<b>£235 per year</b>	<b>£92 per year</b>

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

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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
Main walls	Cavity wall, insulation: As Built	Poor
Main roof	Pitched roof, insulation at Joists, 50 mm	Poor
Main floor	Solid Uninsulated floor (assumed)	Very Poor
Windows	Single glazed windows	Very Poor
Main heating	Old large volume storage heaters	Poor
Main heating controls	Manual charge control	Very Poor
Secondary heating	Electric portable electric heaters Efficiency: 100.00%	Poor
Hot water	Independent electric / immersion water heating systems, Single Immersion	Poor
Lighting	No Low energy lighting	Very Poor

**Current energy efficiency rating** **G 17**

**Current environmental impact rating** **G 18**

### Cost effective 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	Performance ratings after improvement	
			Energy efficiency	Environmental impact
1	Cavity wall insulation	£231 per year	F 26	F 27
2	Loft insulation top up to 250mm	£120 per year	F 32	F 33
3	Hot water tank and pipe work insulation	£53 per year	F 35	F 34
<b>Sub Total</b>		<b>£404 per year</b>		
<b>Higher cost measures</b>				
4	Condensing boiler	£340 per year	D 58	D 57
<b>Total</b>		<b>£744 per year</b>		

**Potential energy efficiency rating** **D 58**

**Potential environmental impact rating** **D 57**



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### Further measures to achieve even higher standards

5	Double glazing	£27 per year	D 60	D 60
6	Solar water heating	£15 per year	D 62	D 61
7	PV Cells	£21 per year	D 63	D 63

**Enhanced energy efficiency rating**

**D 63**

**Enhanced environmental impact rating**

**D 63**

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.



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### Measures to improve this home's energy 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 from an energy advisor before carrying out DIY improvements.

##### Measure 1 Cavity wall insulation

The external walls of this 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, which reduces heat loss through the external walls. The insulation material is pumped into the gap through small holes that are drilled into the outer walls, the holes are made good afterwards. As specialist machinery is used to fill the cavity a professional installation company should carry out this work. Such 'approved contractors' should carry out a thorough survey before commencing work to be sure that this type of insulation is right for this home. They should also provide a guarantee for the work and handle any building control issues.

##### Measure 2 Loft insulation

Insulation laid in the roof space over the joists or between roof rafters to a depth of at least 250 mm will significantly reduce heat loss through the roof. The insulation can be installed by professional contractors but also by a capable DIY enthusiast. Loose granules may be used instead of insulation quilt; this form of loft insulation can be blown into place and can be useful where access is difficult.

##### Measure 3 Hot water cylinder and pipe insulation

Increasing the thickness of existing insulation up to 160mm around the hot water tank will help to reduce fuel bills. 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 preformed pipe insulation of 50mm thickness, for as far as they can be accessed. All these materials can be purchased from DIY stores and installed by a competent DIY enthusiast.

#### Higher cost measures (typically over £500 each)

##### Measure 4 Condensing boiler

A condensing boiler is capable of much higher efficiencies than other types of boiler, meaning it will burn less fuel to heat this property. This improvement is most appropriate when the existing central heating boiler needs repair or replacement. Building Regulations apply to this work, so you will need to notify your Building Control, unless the installer is registered with a competent persons scheme, such as CORGI or OFTEC, who can self certify the work for Building Regulation Compliance.

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

The further measures listed below should be considered in addition to those already specified if aiming for the highest possible standards for this home.

##### Measure 5 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 FENSA or obtain advice from the local Building Control Authority.

##### Measure 6 Solar water heating

A thermal 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. These panels are among the most cost effective renewable systems that can be installed on dwellings in urban or rural environments. The Solar Trade Association has up to date information on installers in your area and any grant that may be available.

##### Measure 7 PV cells



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A Solar Photovoltaic (PV) system is one which converts light directly into electricity via panels placed on your roof with no waste and no emissions. This electricity is used throughout the home in the same way as the electricity you purchase from your energy supplier.



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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

*For the clarification of the technical information in this energy report please contact the:*

*Inspector Trainee Assessor on 01483 427 878*

*Inspector Registration Number 1225-0003*

### 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. We all use energy every day - at home, at work and when we travel. To generate that energy, we burn fossil fuels (coal, oil and gas) that produce 'greenhouse' gases - particularly carbon dioxide - which are changing our climate and damaging the environment. The energy we use for heating, lighting and power in our homes produces over a quarter of the UK's carbon dioxide emissions.

The average household in the UK creates about six tonnes of carbon dioxide every year. There are simple steps you can take to cut carbon dioxide 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 reducing carbon dioxide emissions. You could reduce your

### 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, help reduce your impact on the environment and improve the comfort of your home.

For example:

- Check that your heating system thermostat is not set too high (21°C in the living room is suggested) and use the timer or programmer to ensure you only heat your home when necessary.
- Make sure your hot water is not too hot. Your cylinder thermostat shouldn't need to be set higher than 60°C / 140°F.



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- 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.
- Buy energy saving recommended appliances. Remember to look for the energy saving recommended logo when buying.



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