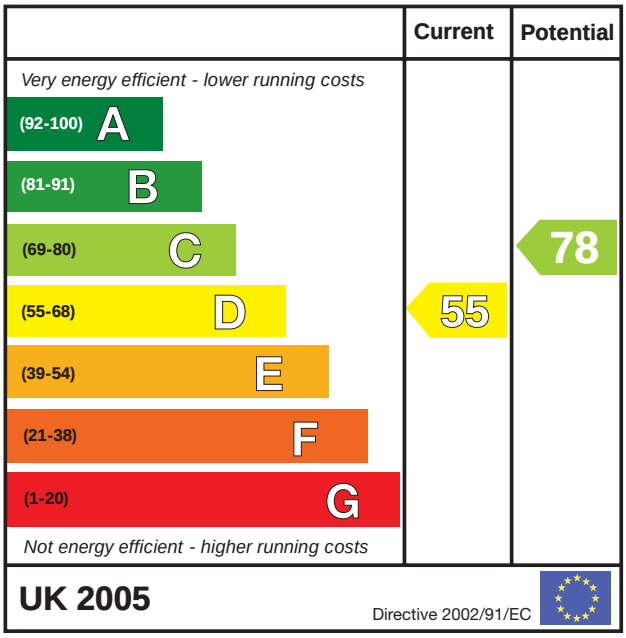
Section H: Energy Performance Certificate

100 Any Street,	Dwelling type:	Detached	Certificate number:	XXXX
Any Town,	Assessment method:	SAP	Date issued:	XXXX
Anywhere, AB1 CD2	Date of inspection:	XXXX	Name of inspector:	XXXX

This home's performance ratings

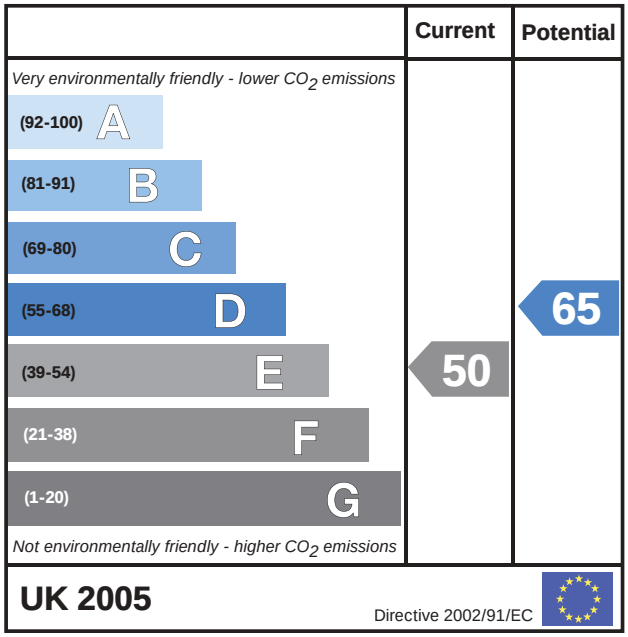
This home has been assessed using the UK's Standard Assessment Procedure (SAP) for dwellings. Its performance is rated in terms of the energy use per square metre of floor area, energy efficiency based on fuel costs and environmental impact based on carbon dioxide (CO_2) emissions.

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 (CO_2) Impact Rating



The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide emissions. The higher the rating the less impact it has on the environment.

Typical energy use, carbon dioxide (CO_2) emissions and fuel costs 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.

	Current	Potential
Energy use	xxx kWh/m^2 per year	xxx kWh/m^2 per year
Carbon dioxide emissions	xx tonnes per year	xx tonnes per year
Lighting	£xxx per year	£xxx per year
Heating	£xxx per year	£xxx per year
Hot water	£xxx per year	£xxx per year

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

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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	Uninsulated cavity wall	Poor
Main roof	Pitched, 100mm loft insulation	Average
Main floor	Uninsulated solid concrete (assumed)	Average
Windows	Single glazed throughout	Very poor
Main heating	Mains gas back boiler	Poor
Main heating controls	No controls	Very poor
Secondary heating	Flame effect fire	Very poor
Hot water	From main heating system; uninsulated cylinder	Very poor
Lighting	Low energy lighting in all fixed outlets	Very good
Current energy efficiency rating		D 55
Current environmental impact rating		E 50

Cost effective measures to improve this home's performance ratings

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	Typical savings	Performance ratings after improvement	
		Energy efficiency	Environmental impact
Cavity wall insulation	£xx per year	D 65	D 56
Loft insulation top up to 250mm	£xx per year	D 68	D 57
Hot water cylinder and pipe work insulation	£xx per year	C 69	D 58
	Sub-total £xx per year		
Higher cost measures			
Condensing boiler	£xx per year	C 75	D 63
Installation of a full heating controls package	£xx per year	C 78	D 65
	Total £xx per year		
Potential energy efficiency rating		C 78	
Potential environmental impact rating			D 65

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.

Double glazing	£xx per year	C 80	D 67
Solar water heating	£xx per year	B 81	D 68
Enhanced energy efficiency rating		B 81	
Enhanced environmental impact rating			D 68

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 reduced carbon dioxide emissions.

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.est.org.uk/myhome

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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 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 anticipated cost is based upon a contractor installing or making up the loft insulation to the equivalent of a 250mm quilt; although the insulation can also be installed 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

This is a partially or fully formed insulation that fits around the hot water cylinder. Installing this, or increasing the thickness of existing insulation, around the hot water cylinder will help to reduce fuel bills. The jacket should be fitted over the top of any 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 the property. This improvement is most appropriate when the existing heating system needs repair or replacement. Only a qualified, CORGI registered heating engineer should carry out the installation. Building Regulations apply to this work, so it's a good idea to get advice from the local Building Control Authority.

Measure 5 Installation of full heating controls package

The heating system requires a programmer and room thermostat to be fitted to ensure the boiler switches off when no heat is required. Thermostatic radiator valves are a useful addition to the room thermostat, allowing the temperature of each room to be controlled to suit individual needs, adding to comfort and reducing heating bills - for example, they can be set to be warmer in the living room and bathroom than in the bedrooms. Ask a competent heating engineer (e.g. CORGI registered) to install radiator valves and a fully-pumped system with the pump and the boiler turned off by the room thermostat. Radiator valves should be fitted to every radiator except one - the radiator in the same room as the room thermostat. Remember you still need the room thermostat to ensure the boiler switches off when no heat is required.

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 6 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 7 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.

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.est.org.uk/myhome

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About this energy inspection

Energy inspections are not new and they have been available in the UK since the late 1980s. This inspection has been undertaken by a qualified inspector who has received appropriate training to collect the correct information about the energy performance of homes. This information has been processed by a Government approved organisation to produce the energy performance certificate and the recommendations for improvements in this report. Both the inspector and the energy performance certificate supplier are regularly monitored to ensure that their work is up to standard.

For clarification of the technical information in this energy performance certificate please contact:
Inspector *on*

About this home's performance ratings

The ratings provide 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 for assessing the energy performance of dwellings. The ratings take into account the home's insulation, heating systems, hot water system, fixed lighting, ventilation, number of windows and fuels used.

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 is based on a home in a central UK location and assumes that during the heating season 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. The cost of providing lighting, heating and hot water to a home with an energy efficiency rating of 100 would be practically zero. Similarly the carbon dioxide emissions from lighting, heating and hot water for a home with an environmental impact rating of 100 would be practically zero.

The potential ratings shown on page one describe the energy performance of the home assuming all cost effective measures have been installed. For comparison a home built to the 2006 Building Regulations would typically be around the boundary of bands B and C.

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 emissions even more by switching to renewable energy sources.

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.
- 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.

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.

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