

About this document

The Energy Performance Certificate for this dwelling was produced following an energy assessment undertaken by a qualified assessor, accredited by Stroma Certification, to a scheme authorised by the Government. This certificate was produced using the SAP 2009 assessment methodology and has been produced under the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007 as amended. A copy of the certificate has been lodged on a national register.

Assessor's accreditation number: STRO006358
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Related party disclosure: No related party

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

Details of the assessor and the relevant accreditation scheme are as above. You can get contact details of the accreditation scheme from their website at www.stroma.com 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 49).

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 home. Different methods of calculation are used for homes and for other buildings. Details can be found at 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 on 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 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.

Visit the Department for Communities and Local Government website at:

www.communities.gov.uk/epbd to:

- Find 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 - the Department is the controller of the data on the register for Data Protection Act 1998 purposes
- Learn more about energy efficiency and reducing energy consumption

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. The indicative costs are representative for most properties but may not apply in a particular case.

Lower cost measures	Indicative Cost	Typical savings per year	Performance ratings after improvement	
			Energy efficiency	Environmental impact
1 Low energy lighting for all fixed outlets	£18	£39	B 90	B 91
Total		£39		

Potential energy efficiency rating **B 90**

Potential environmental impact (CO₂) rating **B 91**

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. The indicative costs are representative for most properties but may not apply in a particular case.

2 Solar photovoltaic panels, 2.5 kWp	£11,000 - £20,000	£214	A 96	A 97
3 Wind turbine	£1,500 - £4,000	£76	A 98	A 99

Enhanced energy efficiency rating **A 98**

Enhanced environmental impact (CO₂) rating **A 99**

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 (CO₂) emissions.

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 by the national calculation methodology; 1 star means least efficient and 5 stars means most efficient.

Element	Description	Current Performance	
		Energy efficiency	Environmental
Walls	Average thermal transmittance 0.21 W/m ² K	★★★★★	★★★★★
Roof	Average thermal transmittance 0.13 W/m ² K	★★★★★	★★★★★
Floor	Average thermal transmittance 0.19 W/m ² K	★★★★★	★★★★★
Windows	High performance glazing	★★★★★	★★★★★
Main heating	Air source heat pump, underfloor, electric	★★★★☆	★★★★☆
Main heating controls	Time and temperature zone control	★★★★★	★★★★★
Secondary heating	None	-	-
Hot water	From main system, plus solar	★★★★☆	★★★★★
Lighting	Low energy lighting in 30% of fixed outlets	★★★☆☆	★★★☆☆
Air tightness	Air permeability 5.0 m ³ /h.m ² (as tested)	★★★★☆	★★★★☆

Current energy efficiency rating **B 89**

Current environmental impact (CO₂) rating **B 90**

Thermal transmittance is a measure of the rate of heat loss through a building element; the lower the value the better the energy performance.
 Air permeability is a measure of the air tightness of a building; the lower the value the better the air tightness.

Low and zero carbon energy sources

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

- Solar water heating
- Air source heat pump

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

Lower cost measures

These measures are relatively inexpensive to install and are worth tackling first. The indicative costs of measures included earlier in this EPC include the costs of professional installation. Some of the cost effective measures below may be installed as DIY projects which will reduce the cost. 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

Low energy light bulbs last up to 12 times longer than ordinary ones and reduce lighting costs.

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.

2 Solar photovoltaic (PV) panels

A solar PV system converts light directly into electricity via panels placed on the roof and can be used throughout the home. Building Regulations apply to this work and planning restrictions may apply. You could be eligible for a Feed-in Tariff which could appreciably increase the savings beyond those shown on your EPC, provided that both the product and the installer are certified by the Microgeneration Certification Scheme (or equivalent). Details of local MCS installers are available at www.microgenerationcertification.org.

3 Wind turbine

A wind turbine provides electricity from wind energy. This electricity can be used throughout the home. Building Regulations apply to this work and planning restrictions may apply. Wind turbines are not suitable for all properties. The system's effectiveness depends on local wind speeds and the presence of nearby obstructions, and a site survey should be undertaken by an accredited installer. You could be eligible for a Feed-in Tariff which could appreciably increase the savings beyond those shown on your EPC, provided that both the product and the installer are certified by the Microgeneration Certification Scheme (or equivalent). Details of local MCS installers are available at www.microgenerationcertification.org.

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. The papers you are given by the builder and the warranty provider will help you in this.
- 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.
- 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.
- Make sure your hot water is not too hot - a cylinder thermostat need not normally be higher than 60°C.
- Close your curtains at night to reduce heat escaping through the windows.
- If you're not filling up the washing machine, tumble dryer or dishwasher, use the half-load or economy programme.