

Energy Performance Certificate

Penmorfa, Tre'r Ddol, MACHYNLLETH, SY20 8PN

Dwelling type: Detached bungalow
Date of assessment: 09 November 2015
Date of certificate: 14 December 2015
Reference number: 8675-6629-5079-0621-2906
Type of assessment: RdSAP, existing dwelling
Total floor area: 284 m²

Use this document to:

- Compare current ratings of properties to see which properties are more energy efficient
- Find out how you can save energy and money by installing improvement measures

Estimated energy costs of dwelling for 3 years:

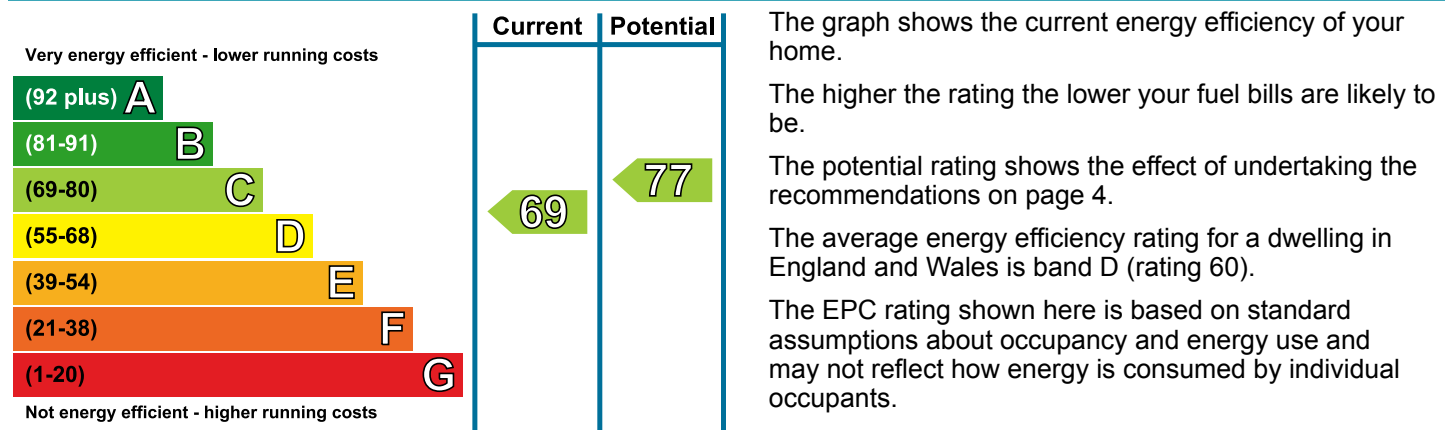
£ 7,704

Estimated energy costs of this home

	Current costs	Potential costs	Potential future savings
Lighting	£ 375 over 3 years	£ 375 over 3 years	Not applicable
Heating	£ 7,005 over 3 years	£ 7,005 over 3 years	
Hot Water	£ 324 over 3 years	£ 324 over 3 years	
Totals	£ 7,704	£ 7,704	

These figures show how much the average household would spend in this property for heating, lighting and hot water and is not based on energy used by individual households. This excludes energy use for running appliances like TVs, computers and cookers, and electricity generated by microgeneration.

Energy Efficiency Rating



Top actions you can take to save money and make your home more efficient

Recommended measures	Indicative cost	Typical savings over 3 years
1 Wind turbine	£15,000 - £25,000	£ 1,650

To receive advice on what measures you can take to reduce your energy bills, visit www.simpleenergyadvice.org.uk or call freephone 0800 444202. The Green Deal may enable you to make your home warmer and cheaper to run.

Summary of this home's energy performance related features

Element	Description	Energy Efficiency
Walls	System built, as built, no insulation (assumed)	★☆☆☆☆
	Cavity wall, as built, insulated (assumed)	★★★★★
Roof	Pitched, limited insulation (assumed)	★☆☆☆☆
	Roof room(s), insulated	★★★★☆
	Roof room(s), insulated (assumed)	★★★★★
Floor	Suspended, insulated	—
	Suspended, insulated (assumed)	—
Windows	Fully double glazed	★★★★☆
Main heating	Air source heat pump, underfloor, electric	★★★☆☆
	Boiler and radiators, wood logs	★★☆☆☆
Main heating controls	Time and temperature zone control	★★★★★
	No time or thermostatic control of room temperature	★☆☆☆☆
Secondary heating	None	—
Hot water	From main system, plus solar	★★★★★
Lighting	Low energy lighting in 92% of fixed outlets	★★★★★

Current primary energy use per square metre of floor area: 173 kWh/m² per year

The assessment does not take into consideration the physical condition of any element. 'Assumed' means that the insulation could not be inspected and an assumption has been made in the methodology based on age and type of construction.

See addendum on the last page relating to items in the table above.

Low and zero carbon energy sources

Low and zero carbon energy sources are sources of energy that release either very little or no carbon dioxide into the atmosphere when they are used. Installing these sources may help reduce energy bills as well as cutting carbon. The following low or zero carbon energy sources are provided for this home:

- Biomass main heating
- Air source heat pump
- Solar water heating
- Solar photovoltaics

Your home's heat demand


For most homes, the vast majority of energy costs derive from heating the home. Where applicable, this table shows the energy that could be saved in this property by insulating the loft and walls, based on typical energy use (shown within brackets as it is a reduction in energy use).

Heat demand	Existing dwelling	Impact of loft insulation	Impact of cavity wall insulation	Impact of solid wall insulation
Space heating (kWh per year)	28,428	(2,040)	N/A	N/A
Water heating (kWh per year)	2,827			

You could receive Renewable Heat Incentive (RHI) payments and help reduce carbon emissions by replacing your existing heating system with one that generates renewable heat, subject to meeting minimum energy efficiency requirements. The estimated energy required for space and water heating will form the basis of the payments. For more information, search for the domestic RHI on the www.gov.uk website.

Recommendations

The measures below will improve the energy performance of your dwelling. The performance ratings after improvements listed below are cumulative; that is, they assume the improvements have been installed in the order that they appear in the table. To receive advice on what measures you can take to reduce your energy bills, visit www.simpleenergyadvice.org.uk or call freephone 0800 444202. Before installing measures, you should make sure you have secured the appropriate permissions, where necessary. Such permissions might include permission from your landlord (if you are a tenant) or approval under Building Regulations for certain types of work.

Recommended measures	Indicative cost	Typical savings per year	Rating after improvement
Wind turbine	£15,000 - £25,000	£ 550	 C77

Alternative measures

There are alternative measures below which you could also consider for your home.

- Cavity, internal or external wall insulation

Financial Support and the Green Deal

Green Deal Finance allows you to pay for some of the cost of your improvements in instalments under a Green Deal Plan (note that this is a credit agreement, but with instalments being added to the electricity bill for the property). The availability of a Green Deal Plan will depend upon your financial circumstances. There is a limit to how much Green Deal Finance can be used, which is determined by how much energy the improvements are estimated to **save** for a 'typical household'.

You may also be able to obtain support towards repairs or replacements of heating systems and/or basic insulation measures under the ECO scheme, provided that you are in receipt of qualifying benefits or tax credits. To learn more about this scheme and the rules about eligibility, visit www.simpleenergyadvice.org.uk or call freephone **0800 444202** for England and Wales.

About this document and the data in it

This document has been produced following an energy assessment undertaken by a qualified Energy Assessor, accredited by Stroma Certification. You can obtain contact details of the Accreditation Scheme at www.stroma.com.

A copy of this certificate has been lodged on a national register as a requirement under the Energy Performance of Buildings Regulations 2012 as amended. It will be made available via the online search function at www.epcregister.com. The certificate (including the building address) and other data about the building collected during the energy assessment but not shown on the certificate, for instance heating system data, will be made publicly available at <https://epc.opendatacommunities.org>.

This certificate and other data about the building may be shared with other bodies (including government departments and enforcement agencies) for research, statistical and enforcement purposes. Any personal data it contains will be processed in accordance with the General Data Protection Regulation and all applicable laws and regulations relating to the processing of personal data and privacy. For further information about this and how data about the property are used, please visit www.epcregister.com. To opt out of having information about your building made publicly available, please visit www.epcregister.com/optout.

Assessor's accreditation number: STRO004442
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Related party disclosure: No related party

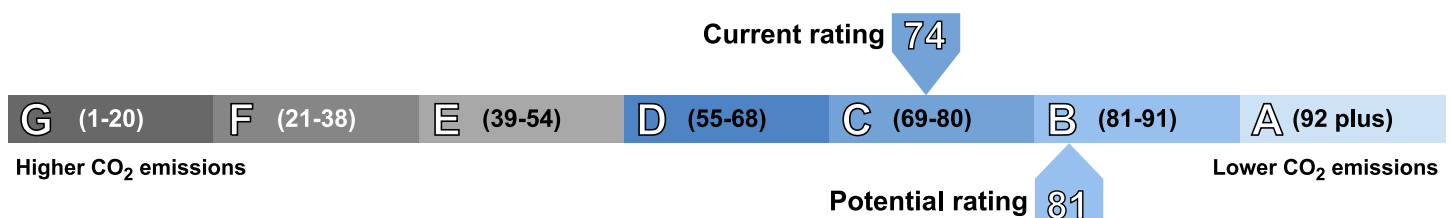
There is more information in the guidance document *Energy Performance Certificates for the marketing, sale and let of dwellings* available on the Government website at: www.gov.uk/government/collections/energy-performance-certificates. It explains the content and use of this document, advises on how to identify the authenticity of a certificate and how to make a complaint.

About the impact of buildings on the environment

One of the biggest contributors to global warming is carbon dioxide. The energy we use for heating, lighting and power in homes produces over a quarter of the UK's carbon dioxide emissions.

The average household causes about 6 tonnes of carbon dioxide every year. Based on this assessment, your home currently produces approximately 6.9 tonnes of carbon dioxide every year. Adopting the recommendations in this report can reduce emissions and protect the environment. If you were to install these recommendations you could reduce this amount by 1.8 tonnes per year. You could reduce emissions even more by switching to renewable energy sources.

The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO₂) emissions based on standardised assumptions about occupancy and energy use. The higher the rating the less impact it has on the environment.



Addendum

This dwelling is a system built property or some of its walls are of non-conventional construction and may be exposed to wind driven rain and requires further investigation to establish the type of construction, the type of wall insulation best suited (cavity insulation or internal/external insulation) and the savings it might deliver. Please go to www.direct.gov.uk/savingenergy to find out more.