

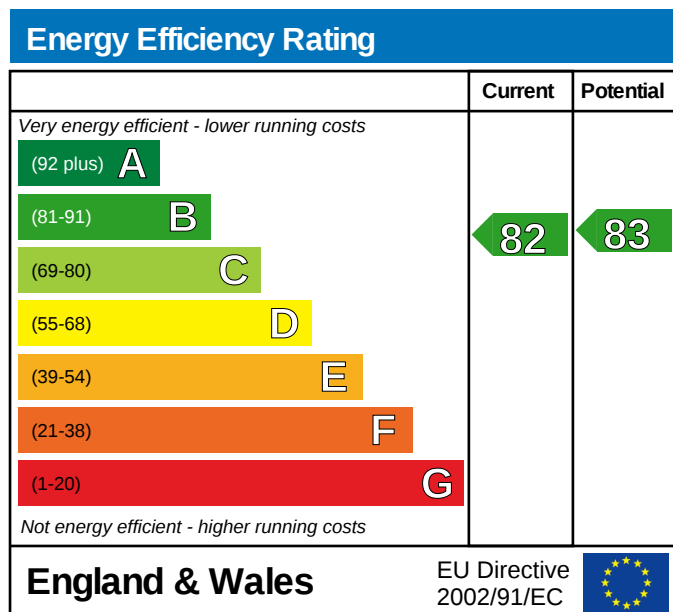
# Energy Performance Certificate



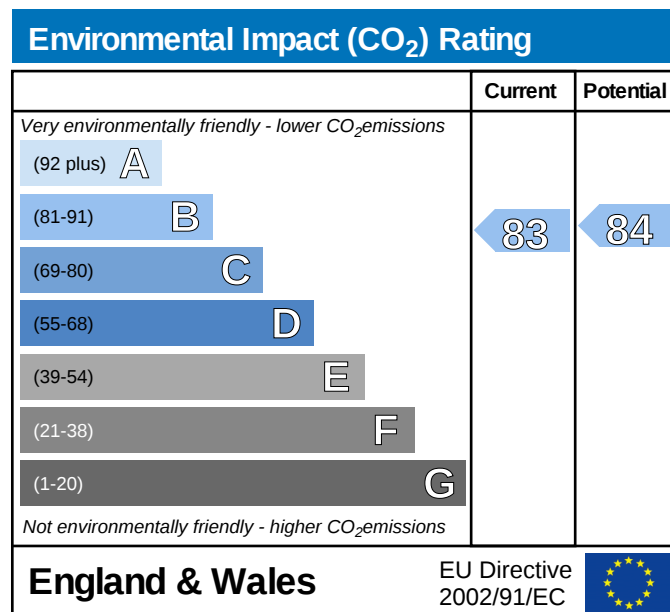
21, Rhodfa Morgan Drive  
Llangunnor  
CARMARTHEN  
SA31 2NT

Dwelling type: Detached house  
Date of assessment: 30 August 2011  
Date of certificate: 30 August 2011  
Reference number: 7508-6030-6398-8499-7940  
Type of assessment: SAP, new dwelling  
Total floor area: 123.55 m<sup>2</sup>

This home's 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<sub>2</sub>) emissions.



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 are likely to be.



The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO<sub>2</sub>) emissions. The higher the rating the less impact it has on the environment.

## Estimated energy use, carbon dioxide (CO<sub>2</sub>) emissions and fuel costs of this home

|                          | Current                        | Potential                      |
|--------------------------|--------------------------------|--------------------------------|
| Energy use               | 90 kWh/m <sup>2</sup> per year | 84 kWh/m <sup>2</sup> per year |
| Carbon dioxide emissions | 2.1 tonnes per year            | 2.0 tonnes per year            |
| Lighting                 | £97 per year                   | £58 per year                   |
| Heating                  | £388 per year                  | £393 per year                  |
| Hot water                | £96 per year                   | £96 per year                   |

The figures in the table above have been provided to enable prospective buyers and tenants to compare the fuel costs and carbon emissions of one home with another. To enable this comparison the figures have been calculated using standardised running conditions (heating periods, room temperatures, etc.) that are the same for all homes, consequently they are unlikely to match an occupier's actual fuel bills and carbon emissions in practice. The figures do not include the impacts of the fuels used for cooking or running appliances, such as TV, fridge etc.; nor do they reflect the costs associated with service, maintenance or safety inspections. Always check the certificate date because fuel prices can change over time and energy saving recommendations will evolve.



Remember to look for the Energy Saving Trust 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.energysavingtrust.org.uk](http://www.energysavingtrust.org.uk)

## About this document

The Energy Performance Certificate for this dwelling was produced following an energy assessment undertaken by a qualified assessor, accredited by Elmhurst Energy Systems Ltd, 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: EES/003460  
Assessor's name: Ms. Laura Cherrington  
Company name/trading name: Elmhurst Energy Services Limited  
Address: 16 St Johns Business Park Lutterworth Leicestershire LE17 4HB  
Phone number: 01455 883259  
Fax number: 01455 883258  
E-mail address: Laura.Cherrington@elmhurstenergy.co.uk  
Related party disclosure:

## 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.elmhurstenergy.co.uk](http://www.elmhurstenergy.co.uk) 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 50).

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](http://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](http://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 | Ratings after improvement |                      |
|---------------------------------------------|-----------------|--------------------------|---------------------------|----------------------|
|                                             |                 |                          | Energy Efficiency         | Environmental Impact |
| 1 Low energy lighting for all fixed outlets | £25             | £33                      | B 83                      | B 84                 |
| Total                                       |                 | £33                      |                           |                      |

## 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 water heating                | £4,000 - £6,000   | £37  | B 85 | B 86 |
| 3 Solar photovoltaic panels, 2.5 kWp | £11,000 - £20,000 | £214 | A 92 | A 93 |

Enhanced energy efficiency rating A 92

Enhanced environmental impact (CO<sub>2</sub>) rating A 93

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 (CO<sub>2</sub>) 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 0.34 W/m <sup>2</sup>               | ★★★★☆               | ★★★★☆         |
| Roof                  | Average thermal transmittance 0.24 W/m <sup>2</sup>               | ★★★★☆               | ★★★★☆         |
| Floor                 | Average thermal transmittance 0.20 W/m <sup>2</sup>               | ★★★★★               | ★★★★★         |
| Windows               | High performance glazing                                          | ★★★★★               | ★★★★★         |
| Main heating          | Boiler and radiators, mains gas                                   | ★★★★☆               | ★★★★☆         |
| Main heating controls | Programmer, room thermostat and TRVs                              | ★★★★☆               | ★★★★☆         |
| Secondary heating     | None                                                              | —                   | —             |
| Hot water             | From main system                                                  | ★★★★☆               | ★★★★☆         |
| Lighting              | Low energy lighting in 33% of fixed outlets                       | ★★★☆☆               | ★★★☆☆         |
| Air Tightness         | Air permeability 5.6 m <sup>3</sup> /h.m <sup>2</sup> (as tested) | ★★★★☆               | ★★★★☆         |

Current energy efficiency rating

B 82

Current environmental impact (CO<sub>2</sub>) rating

B 83

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

None

## Renewable Heat Incentive

You could receive 20 years of RHI payments and help reduce carbon emissions by replacing your existing heating system with one that generates renewable heat and, where appropriate, having your loft insulated to 150 mm and cavity walls filled. The energy required for space and water heating shown below would form the basis of the payments. The Department of Energy and Climate Change has up-to date information on technologies supported and the support levels at [www.decc.gov.uk/rhi](http://www.decc.gov.uk/rhi).

| Heat demand for RHI          |       |
|------------------------------|-------|
| Space heating (kWh per year) | 5,147 |
| Water heating (kWh per year) | 2,383 |

## 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 in most cases. 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

Replacement of traditional light bulbs with energy saving recommended ones will reduce lighting costs over the lifetime of the bulb, and they last up to 12 times longer than ordinary light bulbs. Also consider selecting low energy light fittings when redecorating; contact the Lighting Association for your nearest stockist of Domestic Energy Efficient Lighting Scheme fittings.

## 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 water heating

A solar water heating 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. The Solar Trade Association has up-to-date information on local installers and any grant that may be available.

#### 3 Solar photovoltaic (PV) panels

A solar PV system is one which converts light directly into electricity via panels placed on the roof with no waste and no emissions. This electricity is used throughout the home in the same way as the electricity purchased from an energy supplier. The British Photovoltaic Association has up-to-date information on local installers who are qualified electricians and on any grant that may be available. Planning restrictions may apply in certain neighbourhoods and you should check this with the local authority. Building Regulations apply to this work, so your local authority building control department should be informed, unless the installer is appropriately qualified and registered as such with a competent persons scheme<sup>1</sup>, and can therefore self-certify the work for Building Regulation compliance. The assessment does not include the effect of any feed-in tariff, which could appreciably increase the savings that are shown on this EPC for solar photovoltaic panels.

## 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 CO<sub>2</sub> 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.
- Make sure your hot water is not too hot - a cylinder thermostat need not normally be higher than 60°C
- 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.
- 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.