# Energy Performance Certificate

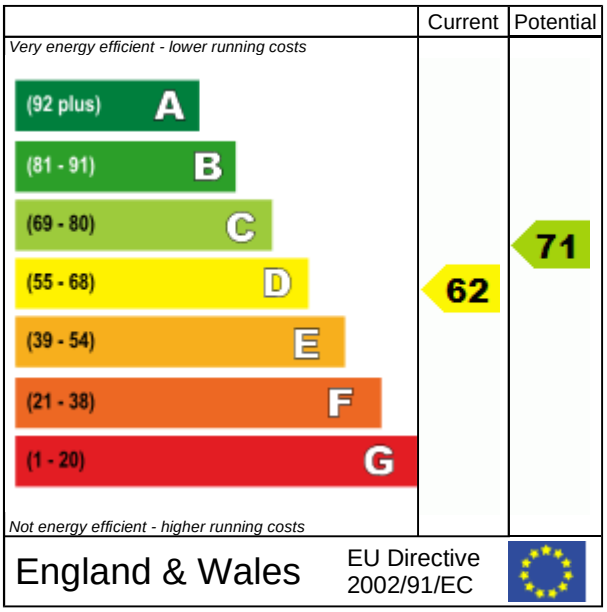
© Crown copyright 2005

475, Warrington Road
Abram
WIGAN
WN2 5XY

Dwelling type: Mid-terrace house
Date of assessment: 18 February 2009
Date of certificate: 19 February 2009
Reference number: 9388-6023-6262-5681-1080
Total floor area: 79 m²

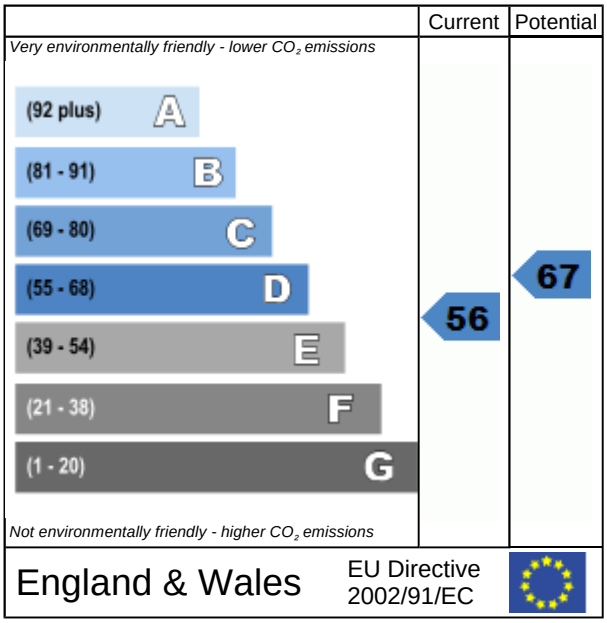
This home's performance is rated in terms of the energy use per square metre of floor area, energy efficiency based on fuel costs and environmental impact based on carbon dioxide ($CO_2$) emissions.

## 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 are likely to be.

## Environmental Impact ($CO_2$) Rating




The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide ($CO_2$) emissions. The higher the rating, the less impact it has on the environment.

## Estimated energy use, carbon dioxide ($CO_2$) emissions and fuel costs of this home

| | Current | Potential |
|---|---|---|
| Energy use | 306 kWh/m² per year | 233 kWh/m² per year |
| Carbon dioxide emissions | 4.0 tonnes per year | 3.1 tonnes per year |
| Lighting | £71 per year | £38 per year |
| Heating | £556 per year | £446 per year |
| Hot water | £99 per year | £86 per year |

Based on standardised assumptions about occupancy, heating patterns and geographical location, the above table provides an indication of how much it will cost to provide lighting, heating and hot water to this home. The fuel costs only take into account the cost of fuel and not any associated service, maintenance or safety inspection. This certificate has been provided for comparative purposes only and enables one home to be compared with another. Always check the date the certificate was issued, because fuel prices can increase over time and energy saving recommendations will evolve.

To see how this home can achieve its potential rating please see the recommended measures.

The address and energy rating of the dwelling in this EPC may be given to EST to provide information on financial help for improving its energy performance.

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/myhome**

## About this document

The Energy Performance Certificate for this dwelling was produced following an energy assessment undertaken by a qualified assessor, accredited by the NHER Accreditation Scheme, to a scheme authorised by the Government. This certificate was produced using the RdSAP 2005 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: | NHER003990 |
| Assessor's name: | Mr John Pendlebury |
| Company name/trading name: | JRP Home Inspectors |
| Address: | 30 Ward Street, Hindley, Wigan, Greater Manchester, WN2 2QH |
| Phone number: | 01942 525718 |
| Fax number: | |
| E-mail address: | pengy1@btinternet.com |

## 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.nher.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 46).

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 Government's 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
- Learn more about energy efficiency and reducing energy consumption.

# Recommended measures to improve this home's energy performance

475, Warrington Road
Abram
WIGAN
WN2 5XY

Date of certificate: 19 February 2009
Reference number: 9388-6023-6262-5681-1080

## 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 | |
|---|---|---|---|
| | | Energy Efficiency | Environmental |
| Walls | Solid brick, as built, no insulation (assumed) | Very poor | Very poor |
| Roofs | Pitched, 100mm loft insulation<br>Pitched, no insulation (assumed) | Average<br>Very poor | Average<br>Very poor |
| Floor | Solid, no insulation (assumed) | - | - |
| Windows | Fully double glazed | Good | Good |
| Main heating | Boiler and radiators, mains gas | Good | Good |
| Main heating controls | Programmer, no room thermostat | Very poor | Very poor |
| Secondary heating | None | - | - |
| Hot water | From main system | Good | Good |
| Lighting | Low energy lighting in 11% of fixed outlets | Poor | Poor |
| **Current energy efficiency rating** | | **D 62** | |
| **Current environmental impact ($CO_2$) rating** | | | **D 56** |

## Low and zero carbon energy sources

None

## 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.

| Lower cost measures (up to £500) | Typical savings per year | Performance ratings after improvements | |
|---|---|---|---|
| | | Energy efficiency | Environmental impact |
| 1 Increase loft insulation to 270 mm | £17 | D 63 | D 57 |
| 2 Low energy lighting for all fixed outlets | £26 | D 65 | D 58 |
| 3 Upgrade heating controls | £53 | D 68 | D 62 |
| Sub-total | £96 | | |
| **Higher cost measures** | | | |
| 4 Replace boiler with Band A condensing boiler | £60 | C 71 | D 67 |
| Total | £156 | | |
| **Potential energy efficiency rating** | | **C 71** | |
| **Potential environmental impact ($CO_2$) rating** | | | **D 67** |

## 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.

| Higher cost measures | | | |
|---|---|---|---|
| 5 Solar water heating | £20 | C 73 | D 68 |
| 6 50mm internal or external wall insulation | £111 | C 79 | C 77 |
| 7 Solar photovoltaic panels, 2.5kWp | £159 | B 90 | B 87 |
| **Enhanced energy efficiency rating** | | **B 90** | |
| **Enhanced environmental impact ($CO_2$) rating** | | | **B 87** |

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 ($CO_2$) emissions.

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

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.

**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 before carrying out DIY improvements.

**1 Loft insulation**
Loft insulation laid in the loft space or between roof rafters to a depth of at least 270 mm will significantly reduce heat loss through the roof; this will improve levels of comfort, reduce energy use and lower fuel bills. Insulation should not be placed below any cold water storage tank, any such tank should also be insulated on its sides and top, and there should be boarding on battens over the insulation to provide safe access between the loft hatch and the cold water tank. 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. The loft space must have adequate ventilation to prevent dampness; seek advice about this if unsure. Further information about loft insulation and details of local contractors can be obtained from the National Insulation Association (www.nationalinsulationassociation.org.uk).

**2 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.

**3 Heating controls (room thermostat and thermostatic radiator valves)**
A room thermostat will increase the efficiency of the heating system by enabling the boiler to switch off when no heat is required; this will reduce the amount of energy used and lower fuel bills. Thermostatic radiator valves should also be installed, to allow the temperature of each room to be controlled to suit individual needs, adding to comfort and reducing heating bills provided internal doors are kept closed. For example, they can be set to be warmer in the living room and bathroom than in the bedrooms. Ask a competent heating engineer to install thermostatic radiator valves and a fully pumped system with the pump and the boiler turned off by the room thermostat. Thermostatic radiator valves should be fitted to every radiator except for the radiator in the same room as the room thermostat. Remember the room thermostat is needed as well as the thermostatic radiator valves, to enable the boiler to switch off when no heat is required.

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

**4 Band A 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, but there may be exceptional circumstances making this impractical. Condensing boilers need a drain for the condensate which limits their location; remember this when considering remodelling the room containing the existing boiler even if the latter is to be retained for the time being (for example a kitchen makeover). Building Regulations apply to this work, so your local authority building control department should be informed, unless the installer is registered with a competent persons scheme[1], and can therefore self-certify the work for Building Regulation compliance. Ask a qualified heating engineer to explain the options.

## 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.

**5 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.

**6 Internal or external wall insulation**

Solid wall insulation involves adding a layer of insulation to either the inside or the outside surface of the external walls, which reduces heat loss and lowers fuel bills. As it is more expensive than cavity wall insulation it is only recommended for walls without a cavity, or where for technical reasons a cavity cannot be filled. Internal insulation, known as dry-lining, is where a layer of insulation is fixed to the inside surface of external walls; this type of insulation is best applied when rooms require redecorating and can be installed by a competent DIY enthusiast. External solid wall insulation is the application of an insulant and a weather-protective finish to the outside of the wall. This may improve the look of the home, particularly where existing brickwork or rendering is poor, and will provide long-lasting weather protection. Further information can be obtained from the National Insulation Association (www.nationalinsulationassociation.org.uk). It should be noted that planning permission might be required.

**7 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[1], and can therefore self-certify the work for Building Regulation compliance.

## 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 $CO_2$ emissions.
- 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 that 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.
- 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.

---

[1] For information on approved competent persons schemes enter "existing competent person schemes" into an internet search engine or contact your local Energy Saving Trust advice centre on 0800 512 012.