Energy Performance Certificate (EPC)

Dwellings

Scotland

246 THE MURRAYS BRAE, EDINBURGH, EH17 8UL

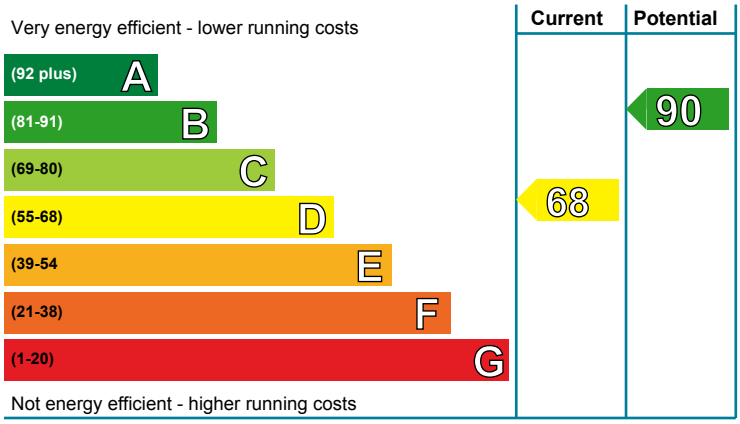
Dwelling type:	End-terrace house	**Reference number:**	0120-2120-4010-9876-8915
Date of assessment:	30 September 2016	**Type of assessment:**	RdSAP, existing dwelling
Date of certificate:	04 October 2016	**Approved Organisation:**	Quidos
Total floor area:	57 m²	**Main heating and fuel:**	Boiler and radiators, mains gas
Primary Energy Indicator:	276 kWh/m²/year		

You can use this document to:

- **Compare current ratings of properties to see which are more energy efficient and environmentally friendly**
- **Find out how to save energy and money and also reduce CO_2 emissions by improving your home**

Estimated energy costs for your home for 3 years*	**£1,980**	See your recommendations report for more information
Over 3 years you could save*	**£609**	

* based upon the cost of energy for heating, hot water, lighting and ventilation, calculated using standard assumptions

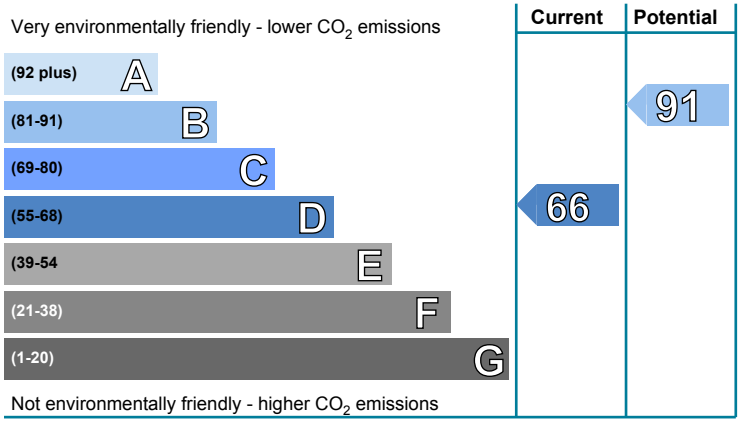


Energy Efficiency Rating

This graph shows the current efficiency of your home, taking into account both energy efficiency and fuel costs. The higher this rating, the lower your fuel bills are likely to be.

Your current rating is **band D (68)**. The average rating for EPCs in Scotland is **band D (61).**

The potential rating shows the effect of undertaking all of the improvement measures listed within your recommendations report.



Environmental Impact (CO_2) Rating

This graph shows the effect of your home on the environment in terms of carbon dioxide (CO_2) emissions. The higher the rating, the less impact it has on the environment.

Your current rating is **band D (66)**. The average rating for EPCs in Scotland is **band D (59).**

The potential rating shows the effect of undertaking all of the improvement measures listed within your recommendations report.

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

Recommended measures	Indicative cost	Typical savings over 3 years	Available with Green Deal
1 Floor insulation (solid floor)	£4,000 - £6,000	£87.00	
2 Add additional 80 mm jacket to hot water cylinder	£15 - £30	£30.00	
3 Condensing boiler	£2,200 - £3,000	£372.00	

A full list of recommended improvement measures for your home, together with more information on potential cost and savings and advice to help you carry out improvements can be found in your recommendations report.

GREEN DEAL APPROVED

The Green Deal may allow you to make your home warmer and cheaper to run at no up-front capital cost. See your recommendations report for more details.

THIS PAGE IS THE ENERGY PERFORMANCE CERTIFICATE WHICH MUST BE AFFIXED TO THE DWELLING AND NOT BE REMOVED UNLESS IT IS REPLACED WITH AN UPDATED CERTIFICATE

Summary of the energy performance related features of this home

This table sets out the results of the survey which lists the current energy-related features of this home. Each element is assessed by the national calculation methodology; 1 star = very poor (least efficient), 2 stars = poor, 3 stars = average, 4 stars = good and 5 stars = very good (most efficient). The assessment does not take into consideration the condition of an element and how well it is working. '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.

Element	Description	Energy Efficiency	Environmental
Walls	Timber frame, as built, insulated (assumed)	★★★★☆	★★★★☆
Roof	Pitched, 300 mm loft insulation	★★★★★	★★★★★
Floor	Solid, limited insulation (assumed)	—	—
Windows	Fully double glazed	★★★☆☆	★★★☆☆
Main heating	Boiler and radiators, mains gas	★★★★☆	★★★★☆
Main heating controls	Programmer and room thermostat	★★★☆☆	★★★☆☆
Secondary heating	None	—	—
Hot water	From main system	★★★☆☆	★★★☆☆
Lighting	Low energy lighting in all fixed outlets	★★★★★	★★★★★

The energy efficiency rating of your home

Your Energy Efficiency Rating is calculated using the standard UK methodology, RdSAP. This calculates energy used for heating, hot water, lighting and ventilation and then applies fuel costs to that energy use to give an overall rating for your home. The rating is given on a scale of 1 to 100. Other than the cost of fuel for electrical appliances and for cooking, a building with a rating of 100 would cost almost nothing to run.

As we all use our homes in different ways, the energy rating is calculated using standard occupancy assumptions which may be different from the way you use it. The rating also uses national weather information to allow comparison between buildings in different parts of Scotland. However, to make information more relevant to your home, local weather data is used to calculate your energy use, CO_2 emissions, running costs and the savings possible from making improvements.

The impact of your home on the environment

One of the biggest contributors to global warming is carbon dioxide. The energy we use for heating, lighting and power in our homes produces over a quarter of the UK's carbon dioxide emissions. Different fuels produce different amounts of carbon dioxide for every kilowatt hour (kWh) of energy used. The Environmental Impact Rating of your home is calculated by applying these 'carbon factors' for the fuels you use to your overall energy use.

The calculated emissions for your home are 49 kg $CO_2/m^2/yr$.

The average Scottish household produces about 6 tonnes of carbon dioxide every year. Based on this assessment, heating and lighting this home currently produces approximately 2.8 tonnes of carbon dioxide every year. Adopting recommendations in this report can reduce emissions and protect the environment. If you were to install all of these recommendations this could reduce emissions by 2.0 tonnes per year. You could reduce emissions even more by switching to renewable energy sources.

Estimated energy costs for this home

	Current energy costs	Potential energy costs	Potential future savings
Heating	£1,341 over 3 years	£1,047 over 3 years	You could save £609 over 3 years
Hot water	£519 over 3 years	£204 over 3 years	
Lighting	£120 over 3 years	£120 over 3 years	
Totals	**£1,980**	**£1,371**	

These figures show how much the average household would spend in this property for heating, lighting and hot water. This excludes energy use for running appliances such as TVs, computers and cookers, and the benefits of any electricity generated by this home (for example, from photovoltaic panels). The potential savings in energy costs show the effect of undertaking all of the recommended measures listed below.

Recommendations for improvement

The measures below will improve the energy and environmental performance of this 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. Further information about the recommended measures and other simple actions to take today to save money is available from the Home Energy Scotland hotline which can be contacted on 0808 808 2282. Before carrying out work, make sure that the appropriate permissions are obtained, where necessary. This may include permission from a landlord (if you are a tenant) or the need to get a Building Warrant for certain types of work.

	Recommended measures	Indicative cost	Typical saving per year	Rating after improvement		Green Deal
				Energy	Environment	
1	Floor insulation (solid floor)	£4,000 - £6,000	£29	C 69	D 68	
2	Add additional 80 mm jacket to hot water cylinder	£15 - £30	£10	C 70	D 68	
3	Replace boiler with new condensing boiler	£2,200 - £3,000	£124	C 75	C 76	
4	Solar water heating	£4,000 - £6,000	£40	C 77	C 79	
5	Solar photovoltaic panels, 2.5 kWp	£5,000 - £8,000	£260	B 90	B 91	

Measures which have a green deal tick are likely to be eligible for Green Deal finance plans based on indicative costs. Subsidy also may be available for some measures, such as solid wall insulation. Additional support may also be available for certain households in receipt of means tested benefits. Measures which have an orange tick may need additional finance. To find out how you could use Green Deal finance to improve your property, visit www.greenerscotland.org or contact the Home Energy Scotland hotline on 0808 808 2282.

Alternative measures

There are alternative improvement measures which you could also consider for your home. It would be advisable to seek further advice and illustration of the benefits and costs of such measures.

- Biomass boiler (Exempted Appliance if in Smoke Control Area)
- Air or ground source heat pump
- Micro CHP

Choosing the right improvement package

For free and impartial advice on choosing suitable measures for your property, contact the Home Energy Scotland hotline on 0808 808 2282 or go to www.greenerscotland.org.

energy saving trust

About the recommended measures to improve your home's performance rating

This section offers additional information and advice on the recommended improvement measures for your home

1 Floor insulation (solid floor)

Insulation of a floor will significantly reduce heat loss; this will improve levels of comfort, reduce energy use and lower fuel bills. Insulating solid floors can present challenges; insulation laid on top of existing solid floors may impact on existing doors and finishes whilst lifting of a solid floor to insert insulation below will require consideration of the potential effect on both structural stability and damp proofing. It is advised to seek advice from a Chartered Structural Engineer or a registered Architect about this if unsure. Further information about floor insulation is available from many sources including www.energysavingtrust.org.uk/scotland/Insulation/Floor-insulation. Building regulations generally apply to this work and may also require a building warrant so it is best to check this with your local authority building standards department.

2 Hot water cylinder insulation

Increasing the thickness of existing insulation by adding an 80 mm cylinder jacket around the hot water cylinder will help maintain the water at the required temperature; this will reduce the amount of energy used and lower fuel bills. The jacket should be fitted over the top of the existing foam insulation and over any thermostat clamped to the cylinder. Hot water pipes from the hot water cylinder should also be insulated, using pre-formed pipe insulation of up to 50 mm thickness, or to suit the space available, for as far as they can be accessed to reduce losses in summer. All these materials can be purchased from DIY stores and installed by a competent DIY enthusiast.

3 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, however 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 generally apply to this work and a building warrant may be required, so it is best to obtain advice from your local authority building standards department and from a qualified heating engineer.

4 Solar water heating

A solar water heating panel, usually fixed to the roof, uses the sun to pre-heat the hot water supply. This can significantly reduce the demand on the heating system to provide hot water and hence save fuel and money. Planning permission might be required, building regulations generally apply to this work and a building warrant may be required, so it is best to check these with your local authority. You could be eligible for Renewable Heat Incentive payments 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.

5 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. Planning permission might be required, building regulations generally apply to this work and a building warrant may be required, so it is best to check these with your local authority. 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, 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.

Low and zero carbon energy sources

Low and zero carbon (LZC) 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.

LZC energy sources present: There are none provided for this home

Your home's heat demand

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 and, where appropriate, having your loft insulated and cavity walls filled. The estimated energy required for space and water heating will form the basis of the payments. For more information go to www.energysavingtrust.org.uk/scotland/rhi.

Heat demand	Existing dwelling	Impact of loft insulation	Impact of cavity wall insulation	Impact of solid wall insulation
Space heating (kWh per year)	5,429	N/A	N/A	N/A
Water heating (kWh per year)	2,582			

About this document

This Recommendations Report and the accompanying Energy Performance Certificate are valid for a maximum of ten years. These documents cease to be valid where superseded by a more recent assessment of the same building carried out by a member of an Approved Organisation.

The Energy Performance Certificate and this Recommendations Report for this building were produced following an energy assessment undertaken by an assessor accredited by Quidos (), an Approved Organisation Appointed by Scottish Ministers. The certificate has been produced under the Energy Performance of Buildings (Scotland) Regulations 2008 from data lodged to the Scottish EPC register. You can verify the validity of this document by visiting www.scottishepcregister.org.uk and entering the report reference number (RRN) printed at the top of this page.

Assessor's name: Anne Currie
Assessor membership number: QUID300907
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Address: 17 Southhouse Grove
Edinburgh
EH17 8EH
Phone number: 0131 664 7250
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Related party disclosure: No related party

If you have any concerns regarding the content of this report or the service provided by your assessor you should in the first instance raise these matters with your assessor and with the Approved Organisation to which they belong. All Approved Organisations are required to publish their complaints and disciplinary procedures and details can be found online at the web address given above.

Use of this energy performance information

Once lodged by your EPC assessor, this Energy Performance Certificate and Recommendations Report are available to view online at www.scottishepcregister.org.uk, with the facility to search for any single record by entering the property address. This gives everyone access to any current, valid EPC except where a property has a Green Deal Plan, in which case the report reference number (RRN) must first be provided. The energy performance data in these documents, together with other building information gathered during the assessment is held on the Scottish EPC Register and is available to authorised recipients, including organisations delivering energy efficiency and carbon reduction initiatives on behalf of the Scottish and UK governments. A range of data from all assessments undertaken in Scotland is also published periodically by the Scottish Government. Further information on these matters and on Energy Performance Certificates in general, can be found at www.gov.scot/epc.

Opportunity to benefit from a Green Deal on this property

Under a Green Deal, the cost of the improvements is repaid over time via a credit agreement. Repayments are made through a charge added to the electricity bill for the property.

To see which improvements are recommended for this property, please turn to page 3. You can choose which improvements you want to install and ask for a quote from an authorised Green Deal provider. They will organise installation by an authorised Green Deal installer. If you move home, the responsibility for paying the Green Deal charge under the credit agreement passes to the new electricity bill payer.

For householders in receipt of income-related benefits, additional help may be available.

To find out more, visit **www.greenerscotland.org or call 0808 808 2282.**

