

Energy Performance Certificate (EPC)

Scotland

Dwellings

23 UNION STREET EAST, ARBROATH, DD11 1BS

Dwelling type: Mid-terrace house
Date of assessment: 24 February 2017
Date of certificate: 27 February 2017
Total floor area: 91 m²
Primary Energy Indicator: 419 kWh/m²/year

Reference number: 2644-1011-8202-9043-0900
Type of assessment: RdSAP, existing dwelling
Approved Organisation: Elmhurst
Main heating and fuel: Boiler and radiators, mains gas

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 CO₂ emissions by improving your home

Estimated energy costs for your home for 3 years*	£4,287	See your recommendations report for more information
Over 3 years you could save*	£378	

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

Very energy efficient - lower running costs



Not energy efficient - higher running costs

Current	Potential
52	66

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 E (52)**. 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.

Very environmentally friendly - lower CO₂ emissions



Not environmentally friendly - higher CO₂ emissions

Current	Potential
44	56

Environmental Impact (CO₂) Rating

This graph shows the effect of your home on the environment in terms of carbon dioxide (CO₂) emissions. The higher the rating, the less impact it has on the environment.

Your current rating is **band E (44)**. 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
1 Increase loft insulation to 270 mm	£100 - £350	£96.00
2 Floor insulation (suspended floor)	£800 - £1,200	£90.00
3 Add additional 80 mm jacket to hot water cylinder	£15 - £30	£48.00

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.

To find out more about the recommended measures and other actions you could take today to stop wasting energy and money, visit greenerscotland.org or contact Home Energy Scotland on 0808 808 2282.

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	Cavity wall, as built, insulated (assumed)	★★★★☆	★★★★☆
Roof	Roof room(s), limited insulation (assumed)	★★☆☆☆	★★☆☆☆
Floor	Suspended, no insulation (assumed)	—	—
	Solid, limited insulation (assumed)	—	—
Windows	Fully double glazed	★★★☆☆	★★★★☆
Main heating	Boiler and radiators, mains gas	★★★★☆	★★★★☆
Main heating controls	Programmer, room thermostat and TRVs	★★★★☆	★★★★☆
Secondary heating	Room heaters, mains gas	—	—
Hot water	From main system	★★★★☆	★★★★☆
Lighting	Low energy lighting in 83% of 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, CO₂ 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 74 kg CO₂/m²/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 6.7 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 1.6 tonnes per year. You could reduce emissions even more by switching to renewable energy sources.


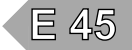

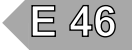






Estimated energy costs for this home

	Current energy costs	Potential energy costs	Potential future savings
Heating	£3,567 over 3 years	£3,432 over 3 years	
Hot water	£513 over 3 years	£270 over 3 years	
Lighting	£207 over 3 years	£207 over 3 years	
Totals	£4,287	£3,909	

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	
			Energy	Environment
1 Increase loft insulation to 270 mm	£100 - £350	£32		
2 Floor insulation (suspended floor)	£800 - £1,200	£30		
3 Add additional 80 mm jacket to hot water cylinder	£15 - £30	£16		
4 Solar water heating	£4,000 - £6,000	£49		
5 Solar photovoltaic panels, 2.5 kWp	£5,000 - £8,000	£273		

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.

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 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 Floor insulation (suspended floor)

Insulation of a floor will significantly reduce heat loss; this will improve levels of comfort, reduce energy use and lower fuel bills. Suspended floors can often be insulated from below but must have adequate ventilation to prevent dampness; seek advice 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 so it is best to check with your local authority building standards department.

3 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.

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 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

In this section, you can see how much energy you might need to heat your home and provide hot water. These are estimates showing how an average household uses energy. These estimates may not reflect your actual energy use, which could be higher or lower. You might spend more money on heating and hot water if your house is less energy efficient. The table below shows the potential benefit of having your loft and walls insulated. Visit <https://energysavingtrust.org.uk/energy-at-home> for more information.

Heat demand	Existing dwelling	Impact of loft insulation	Impact of cavity wall insulation	Impact of solid wall insulation
Space heating (kWh per year)	16,260	(514)	N/A	(83)
Water heating (kWh per year)	3,256			

Addendum

This dwelling has stone walls and so requires further investigation to establish whether these walls are of cavity construction and to determine which type of wall insulation is best suited.

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 Elmhurst (www.elmhurstenergy.co.uk), 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.

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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.

Advice and support to improve this property

There is support available, which could help you carry out some of the improvements recommended for this property on page 3 and stop wasting energy and money. For more information, visit greenerScotland.org or contact Home Energy Scotland on 0808 808 2282.

Home Energy Scotland's independent and expert advisors can offer free and impartial advice on all aspects of energy efficiency, renewable energy and more.

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