# **Energy Performance Certificate**

### Address of dweling and other details

PF1

19 DEAN BANK LANE EDINBURGH

EH3 5BS

Dwelling type:

Name of approved organisation:

Membership number:
Date of certficate:

Reference Number: Type of assessment:

Total floor area:

Main type of heating and fuel:

Mid-floor flat

Ecmk Ltd ECMK230005

15 July 2010

0310-5223-6000-0091-3902 RdSAP, existing dwelling

40 m<sup>2</sup>

Electric storage heaters

### This dwelling's performance ratings

This dwelling has been assessed using the RdSAP 2005 methodology. Its 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. CO<sub>2</sub> is a greenhouse gas that contributes to climate change.

# Energy Efficiency Rating

	Current	Potential
Very energy efficient - lower running costs (92 plus) A	,	
(81-91) B		
(69-80)		
(55-68)	56	68
(39-54)		
(21-38)		
(1-20)		
Not energy efficient - higher running costs	 	
Scotland	J Directiv 02/91/E0	

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.

### Environment Impact (CO<sub>2</sub>) Rating

, , , , , , , , , , , , , , , , , , ,	Current	Potential
Very environmentally friendly - lower (92 plus)	CO <sub>2</sub> emissions	
(81-91) B		
(69-80)		
(55-68)		55
(39-54)	E 43	
(24-318)	F	
(1-20)	G amissions	
Not environmentally friendly - higher Scotland	EU Directiv 2002/91/EC	

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.

Approximate current energy use per square metre of floor area: 632 kWh/m² per year Approximate current CO<sub>2</sub> emissions: 95 kg/m² per year

### Cost effective improvements

Below is a list of lower cost measures that will raise the energy performance of the dwelling to the potential indicated in the tables above. Higher cost measures could also be considered and these are recommended in the attached energy report.

1 Cavity wall insulation

A full energy report is appended to this certificate



Remember to look for the energy saving recommended logo when buying energy-efficient products. It's a quick and easy way to identify the most energy-efficient products on the market. Information from this EPC may be given to the Energy Saving Trust to provide advice to householders on financial help available to improve home energy efficiency.

### Energy report



The Energy Performance Certificate and Energy Report for this dwelling were produced following an energy assessment undertaken by a member of Ecmk Ltd. This is an organisation which has been approved by the Scottish Ministers. The certificate has been produced under the Building (Scotland) Amendment Regulations 2006 and a copy of the certificate and this energy report have been lodged on a national register.

Assessor's name: Mr Lockhart Brown Company name/trading name: Contract Heating Ltd

Address: 2B Bankhead Crossway South, Edinburgh

Midlothian, EH11 4EX

Phone number: 0131 4583377

Fax number:

E-mail address: lockiebrown@contractheating.co.uk

Related party disclosure: No related party

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

	Current	Potential
Energy use	632 kWh/m² per year	474 kWh/m² per year
Carbon dioxide emissions	3.8 tonnes per year	2.9 tonnes per year
Lighting	£23 per year	£23 per year
Heating	£296 per year	£159 per year
Hot water	£218 per year	£218 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 practise. 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.

### 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.

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.

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 in 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.

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Page 2 of 5

# Summary of this home's energy performance related features

The table below is an assessment of the key individual elements that have an impact on this home's energy and environmental performance. Each element is assessed by the national calculation methodology against the following scale: Very poor / Poor / Average / Good / Very good. 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.

		Current performance	
Element	Description	Energy Efficiency	Environmental
Walls	Cavity wall, as built, no insulation (assumed)	Very poor	Very poor
Roof	(another dwelling above)	-	_
Floor	(other premises below)	-	-
Windows	Fully double glazed	Average	Average
Main heating	Electric storage heaters	Poor	Very poor
Main heating controls	Manual charge control	Poor	Poor
Secondary heating	Portable electric heaters	-	•
Hot water	Electric immersion, off-peak	Average	Poor
Lighting	Low energy lighting in all fixed outlets	Very good	Very good
Current energy effic	iency rating	D 56	

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

E 43

### Low and zero carbon energy sources

These are sources of energy (producing or providing electricity or hot water) which emit little or no carbon dioxide into the atmosphere. There are none applicable to this home.

ECMK230005 RRN: 15 July 2010

### Recommended measures to improve this home's energy performance

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. However you should check the conditions in any covenants, warranties or sale contracts, and whether any legal permissions are required such as a building warrant, planning consent or listed building restrictions.

( to CEOO)	Typical savings per	Performance ratings	after improvement	
Lower cost measures (up to £500)	year	Energy Efficiency	Environmental	
1 Cavity wall insulation	£137	D 68 D 55		
Sub-total	£137			
Higher cost measures (over £500)				
Fan assisted storage heaters and dual immersion cylinder	£23	C 70	D 56	
Total	£160			
Potential Energy efficiency rating		C 70		
Potential environmental impact (CO <sub>2</sub> )	rating		D 56	

### Further measures to achieve even higher standards

#### None

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.

# 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 Cavity wall insulation

Cavity wall insulation, to fill the gap between the inner and outer layers of external walls with an insulating material, reduces heat loss; this will improve levels of comfort, reduce energy use and lower fuel bills. The insulation material is pumped into the gap through small holes that are drilled into the outer walls, and the holes are made good afterwards. As specialist machinery is used to fill the cavity, a professional installation company should carry out this work, and they should carry out a thorough survey before commencing work to ensure that this type of insulation is suitable for this home and its exposure. They should also provide a guarantee for the work and handle any building standards issues. Further information about cavity wall insulation and details of local installers can be obtained from the National Insulation Association (www.nationalinsulationassociation.org.uk).

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

### 2 Fan assisted storage heaters

Modern storage heaters are smaller and easier to control than the older type in the property. Ask for a quotation for new, fan-assisted heaters with automatic charge control. A dual-immersion cylinder, which can be installed at the same time, will provide cheaper hot water than the system currently installed. Installations should be in accordance with the current regulations covering electrical wiring. Building regulations may apply to this work, so it is best to obtain advice from your local authority building standards department and from a qualified heating engineer. Ask the heating engineer to explain the options, which might also include switching to other forms of electric heating.

# About the further measures to achieve even higher standards

Not applicable

### 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.
- If you have a conservatory or sunroom, avoid heating it in order to use it in cold weather and close doors between the conservatory and dwelling.
- 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. Minimise the use of tumble dryers and dry clothes outdoors where possible.

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.

# Energy Performance Certificate (EPC)



#### 1F2, 84 IONA STREET, EDINBURGH, EH6 8RW

Dwelling type:

Mid-floor flat Date of assessment: 27 January 2014

Date of certificate: Total floor area:

27 January 2014

34 m<sup>2</sup>

Reference number:

Type of assessment:

Primary Energy Indicator: Main heating and fuel:

9114-0229-4100-0263-3922

RdSAP, existing dwelling

422 kWh/m²/year

No system present: electric

heaters assumed

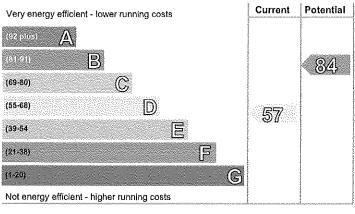
You can use this document to:

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* £2,049	(apy sec Frankrindshers
	Transition rates
Over 3 years you could save* £1,287	miormation

 $<sup>^</sup>st$  based upon the cost of energy for heating, hot water, lighting and ventilation, calculated using standard assumptions

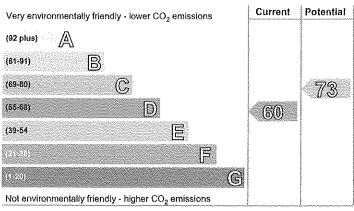


# 

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 (57). The average rating for a home 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<sub>2</sub>) Rating

This graph shows the effect of your home 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.

Your current rating is band D (60). The average rating for a home in Scotland is band D (59).

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

# op 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 Internal or external wall insulation	£4,000 - £14,000	£513	Ů.
2 Add additional 80 mm jacket to hot water cylinder	£15 - £30	£63	٥
3 Low energy lighting	£15	£24	makes stability and the stability of the

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.



The Green Deal may allow you to make your home warmer and cheaper to run at no up-front 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	Sandstone, as built, no insulation (assumed)		
Roof	(another dwelling above)	And Controlled to the Controll	Meyente
Floor	(other premises below)		*******
Windows	Fully double glazed		****
Main heating	No system present: electric heaters assumed	****	<b>★☆☆☆★</b>
Main heating controls	None		****
Secondary heating	Room heaters, electric	0.7	
Hot water	Electric immersion, standard tariff		****
Lighting	Low energy lighting in 40% 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, CO<sub>2</sub> 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 average Scottish household produces about 6 tonnes of carbon dioxide every year. Based on this assessment, heating and lighting this home currently produces approximately 2.5 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 0.8 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	£1,242 over 3 years	£429 over 3 years	
Hot water	£696 over 3 years	£255 over 3 years	Your could
Lighting	£111 over 3 years	£78 over 3 years	save £1,287
Totals	£2,049	£762	over 3 years

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.

Re	commended measures	Indicative cost	Typical saving per year		improvement Environment	
1	Internal or external wall insulation	£4,000 - £14,000	£171	D 68	© 70	The second of th
2	Add additional 80 mm jacket to hot water cylinder	£15 - £30	£21	(C 69	C 71	
3	Low energy lighting for all fixed outlets	£15	£8	C 70	C 72	mental de la companiona
4	Fan assisted storage heaters and dual immersion cylinder	£600 - £800	£214	(B 82	C 71	
5	Heat recovery system for mixer showers	£585 - £725	£16	(B 84)	C 73	

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.



### 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 Internal or external wall insulation

Internal or external 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. 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 and that building regulations apply to this work so it is best to check with your local authority whether a building warrant or planning permission will be required.

#### 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 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.

#### 4 Fan assisted storage heaters

Modern storage heaters are less expensive to run than the direct acting, on-peak heating system in the property. A dual-rate electricity supply is required to provide the off-peak electricity that these heaters use; this is easily obtained by contacting the energy supplier. Ask for a quotation for fan-assisted heaters with automatic charge control. A dual-immersion cylinder, which can be installed at the same time, will provide cheaper hot water than the system currently installed. Installations should be in accordance with the national wiring standards. 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 electrical heating engineer. Ask the heating engineer to explain the options, which might also include switching to other forms of electric heating.

### 5 Heat recovery system for mixer showers

A shower heat recovery system extracts heat from the water in the shower drain and transfers it to incoming cold water. This reduces the amount of energy needed per shower. You should seek advice from a qualified plumber. Building regulations generally apply to this work, so it is best to check this with your local authority building standards department.

### Low and zero earbon 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

### doubled prouggestanderschaftergegerere

For most homes, the vast majority of energy costs come from heating the home. Where applicable to your home, the table below shows the energy that could be saved by insulating the attic and walls, based upon the typical energy use for this building. Numbers shown in brackets are the reduction in energy use possible from each improvement measure.

Heat demand	Existing dwelling	Impact of loft insulation	Impact of cavity wall insulation	Impact of solid wall insulation
Space heating (kWh per year)	2,953	N/A	N/A	(1,465)
Water heating (kWh per year)	1,655			THE PART OF THE STATE OF THE SEMBLAND ASSESSMENT AS THE STATE OF THE S

### Atelelenelline

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.

### A double this elocation and

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.

Assessor's name:

Phone number:

Email address:

Related party disclosure:

Assessor membership number:

Company name/trading name:

Address:

Mr. James Pike EES/006477

JLP Development Consultancy

Elm Lodge 40 Eskbank Road

Midlothian Dalkeith

**EH22 3BT** 

0131 660 2762

jimpike@jlpdc.co.uk 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

This Certificate and Recommendations Report will be available to view online by any party with access to the report reference number (RRN) and to organisations delivering energy efficiency and carbon reduction initiatives on behalf of the Scottish and UK Governments. If you are the current owner or occupier of this building and do not wish this data to be used by these organisations to contact you in relation to such initiatives, please opt out by visiting www.scottishepcregister.org.uk and your data will be restricted accordingly. Further information on this and on Energy Performance Certificates in general can be found at www.scotland.gov.uk/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.

Authorised home energy assessment

Finance at no upfront cost

Choose from authorised installers May be paid from savings in energy bills

Repayments stay with the electricity bill payer