Energy Performance Certificate

Address of dwelling and other details

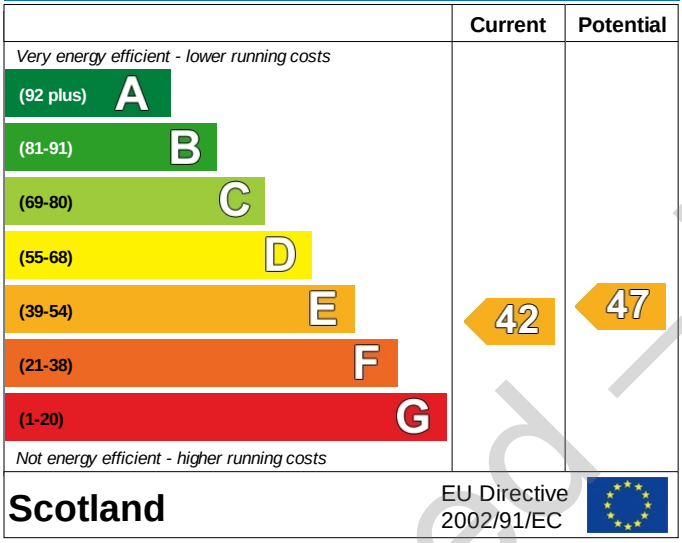
21 KELVINSIDE GARDENS EAST
GLASGOW
G20 6BE

Dwelling type:	Ground-floor flat
Name of approved organisation:	Northgate Information Solutions
Membership number:	NGIS800612
Date of certificate:	17 May 2012
Reference number:	1912-4525-2000-0185-2992
Type of assessment:	RdSAP, existing dwelling
Total floor area:	95 m²
Main type of heating and fuel:	Boiler and radiators, mains gas

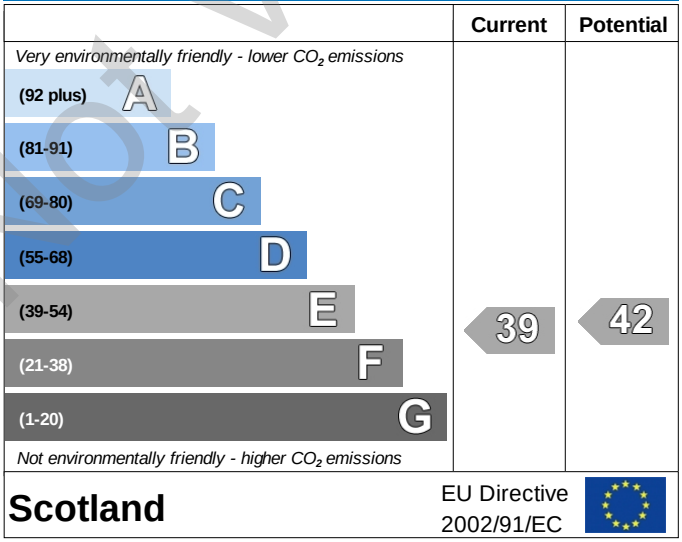
This dwelling's performance ratings

This dwelling has been assessed using the RdSAP 2009 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 the carbon dioxide (CO_2) emissions. CO_2 is a greenhouse gas that contributes to climate change.

Energy Efficiency Rating



Environmental Impact (CO_2) 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 will be.

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: 381 kWh/m² per year

Approximate current CO_2 emissions: 73 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 be considered and these are recommended in the attached energy report.

1 Low energy lighting for all fixed outlets
2 Upgrade heating controls

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.

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N.B. THIS CERTIFICATE MUST BE AFFIXED TO THE DWELLING AND NOT BE REMOVED UNLESS IT IS REPLACED WITH AN UPDATED VERSION.

Energy Report

The Energy Performance Certificate and Energy Report for this dwelling were produced following an energy assessment undertaken by a member of Northgate Information Solutions. 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:	Andrew Scrimgeour
Company name/trading name:	Harvey Donaldson and Gibson
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Related party disclosure:	No related party

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

	Current	Potential
Energy use	381 kWh/m² per year	349 kWh/m² per year
Carbon dioxide emissions	7.0 tonnes per year	6.4 tonnes per year
Lighting	£104 per year	£52 per year
Heating	£1,134 per year	£1,073 per year
Hot water	£100 per year	£100 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.

About the building's performance rating

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 should 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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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; 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 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.

Element	Description	Current Performance	
		Energy Efficiency	Environmental
Walls	Sandstone, as built, no insulation (assumed) Cavity wall, filled cavity	★★☆☆☆ ★★★★☆	★★☆☆☆ ★★★★☆
Roof	Pitched, no insulation (assumed)	★☆☆☆☆	★☆☆☆☆
Floor	Suspended, no insulation (assumed)	–	–
Windows	Single glazed	★☆☆☆☆	★☆☆☆☆
Main heating	Boiler and radiators, mains gas	★★★★☆	★★★★☆
Main heating controls	Programmer, TRVs and bypass	★★★☆☆	★★★☆☆
Secondary heating	None	–	–
Hot water	From main system	★★★★☆	★★★★☆
Lighting	No low energy lighting	★☆☆☆☆	★☆☆☆☆
Current energy efficiency rating		**E 42**	
Current environmental impact (CO_2) rating			**E 39**

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.

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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. 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	£44	E 44	E 40
2 Upgrade heating controls	£350 - £450	£69	E 47	E 42
Sub-total		£113		
Higher cost measures				
3 Replace boiler with new condensing boiler	£1,500 - £3,500	£123	E 52	E 47
Total		£236		
Potential energy efficiency rating			**E 52**	
Potential environmental impact (CO_2) rating				**E 47**

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. Some of the measures may be cost-effective when other building work is being carried out such as an alteration, extension or repair. Also they may become cost-effective in the future depending on changes in technology costs and fuel prices. However you should check the conditions in any covenants, planning conditions, warranties or sale contracts before undertaking any of these measures. The indicative costs are representative for most properties but may not apply in a particular case.

4 Replace single glazed windows with low-E double glazing	£2,500 - £6,500	£54	D 55	E 50
5 50 mm internal or external wall insulation	£5,500 - £14,500	£71	D 57	E 52
Enhanced energy efficiency rating			**D 57**	
Enhanced environmental impact (CO_2) rating				**E 52**

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 reduced carbon dioxide (CO_2) emissions.

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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.

Low 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 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 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.

2 Heating controls (room thermostat)

The heating system should have a room thermostat to enable the boiler to switch off when no heat is required. A competent heating engineer should be asked to do this work. Insist that the thermostat switches off the boiler as well as the pump and that the thermostatic radiator valve is removed from any radiator in the same room as the thermostat. 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.

Higher cost measures

3 New 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 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.

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.

4 Double glazing

Double glazing is the term given to a system where two panes of glass are made up into a sealed unit. Replacing existing single-glazed windows with double glazing will improve comfort in the home by reducing draughts and cold spots near windows. Double-glazed windows may also reduce noise, improve security and combat problems with condensation. Building standards may apply to this work, so it is best to obtain advice from your local authority building standards department.

5 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 and that building standards may apply to this work.

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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.
- 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, 21ºC 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. Minimise the use of tumble dryers and dry clothes outdoors where possible.
- Check the draught-proofing of windows and replace it if appropriate.
- If you have unused open chimneys consider blocking them off (making provision for a ventilation opening and a cowl on top of the chimney to avoid dampness).

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.

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