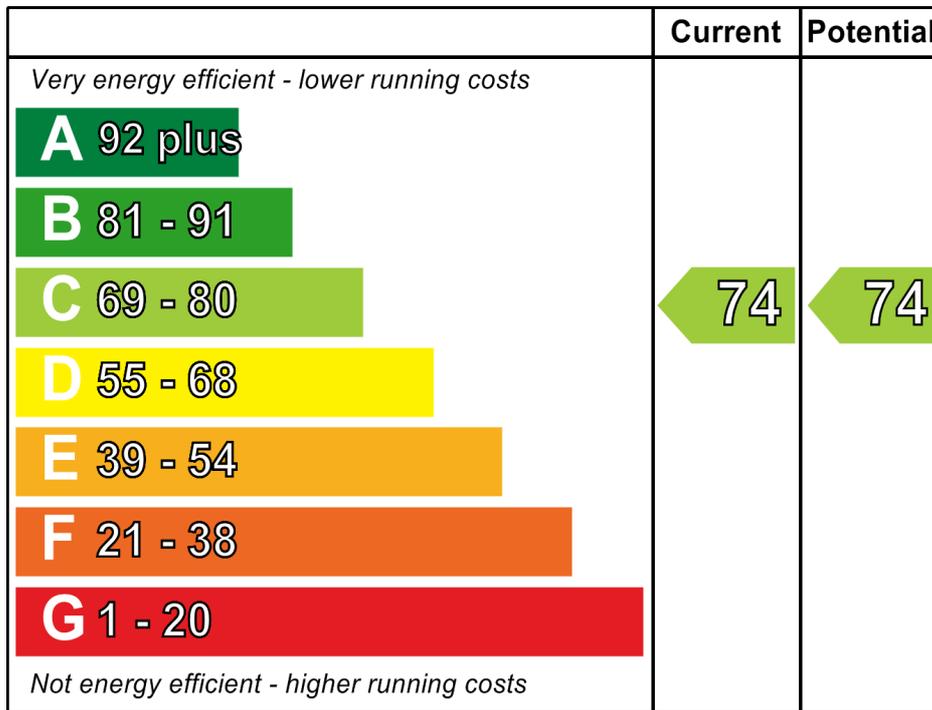


18b, Loughdoo Road  
Ardkeen  
NEWTOWNARDS  
BT22 1HN

Date of assessment:  
Date of certificate:  
Reference number:  
Type of assessment:  
Accreditation scheme:  
Assessor's name:  
Assessor's accreditation number:  
Employer/trading name:  
Employer/trading address:  
  
Related party disclosure:

21 January 2012  
21 January 2012  
0469-3979-0699-9322-3631  
SAP, new dwelling  
Stroma Certification  
Gregory Keating  
STRO005072  
Gregory Keating  
5 The Gables, Portaferry  
N Ireland BT22 1RR  
No related party

## Energy Efficiency Rating



## Technical Information

**Main heating type and fuel:** Boiler and radiators, wood pellets  
**Total floor area:** 355 m<sup>2</sup>  
**Approximate energy use:** 92 kWh/m<sup>2</sup> per year  
**Approximate CO<sub>2</sub> emissions:** 5 kg/m<sup>2</sup> per year  
**Dwelling type:** Detached bungalow

## Benchmark

Typical new build **79**  
 Average for Northern Ireland **50**

The approximate energy use and CO<sub>2</sub> emissions are per square metre of floor area based on fuel costs for the heating, ventilation, hot water and lighting systems. The rating can be compared to two benchmarks: one that would be attained by a typical new dwelling with oil heating constructed to the minimum standards of the building regulations current at the date of the assessment and the second is the average for the housing stock in Northern Ireland.

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

	Current	Potential
Energy use	92 kWh/m <sup>2</sup> per year	92 kWh/m <sup>2</sup> per year
Carbon dioxide emissions	1.9 tonnes per year	1.9 tonnes per year
Lighting	£225 per year	£225 per year
Heating	£1049 per year	£1049 per year
Hot water	£170 per year	£170 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.

### About this document

The Energy Performance Certificate for this dwelling was produced following an energy assessment undertaken by a qualified assessor, accredited by Stroma Certification, to a scheme authorised by the Government. This certificate was produced using the SAP 2005 assessment methodology and has been produced under the Energy Performance of Buildings (Certificates and Inspections) Regulations (Northern Ireland) 2008. A copy of the certificate has been lodged on a national register.

### If you have a complaint or wish to confirm that the certificate is genuine

Details of the assessor and the relevant accreditation scheme are on the preceding page. You can get contact details of the accreditation scheme from their website at [www.stroma.com](http://www.stroma.com) 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 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 Northern Ireland is band E (rating 50).

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.epb.dfpni.gov.uk](http://www.epb.dfpni.gov.uk)

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 describe how close this building could get to 100 if all the cost effective recommended improvements were implemented.



Certification mark

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.

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](http://www.energysavingtrust.org.uk)

**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.

**Environmental Impact (CO<sub>2</sub>) Rating**

	Current	Potential
<i>Very environmentally friendly - lower CO<sub>2</sub> emissions</i>		
<b>A</b> 92 plus	94	94
<b>B</b> 81 - 91		
<b>C</b> 69 - 80		
<b>D</b> 55 - 68		
<b>E</b> 39 - 54		
<b>F</b> 21 - 38		
<b>G</b> 1 - 20		
<i>Not environmentally friendly - higher CO<sub>2</sub> emissions</i>		

**Visit the Department of Finance and Personnel website at [www.epb.dfpni.gov.uk](http://www.epb.dfpni.gov.uk) 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

18b, Loughdoo Road  
Ardkeen  
NEWTOWNARDS  
BT22 1HN

Date of certificate:  
Reference number:

21 January 2012  
0469-3979-0699-9322-3631

## 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: Compliant / Average / Good / Very good.

Element	Description	Current Performance	
		Energy efficiency	Environmental
Walls	Average thermal transmittance 0.29 W/m <sup>2</sup> K	Very good	Very good
Roof	Average thermal transmittance 0.2 W/m <sup>2</sup> K	Good	Good
Floor	Average thermal transmittance 0.18 W/m <sup>2</sup> K	Very good	Very good
Windows	Fully double glazed	Good	Good
Main heating	Boiler and radiators, wood pellets	Compliant	Very good
Main heating controls	Time and temperature zone control	Good	Good
Secondary heating	Room heaters, dual fuel (mineral and wood)	-	-
Hot water	From main system	Average	Very good
Lighting	Low energy lighting in 100% of all fixed outlets	Very good	Very good
Air tightness	(not tested)	-	-

**Current energy efficiency rating**

**C 74**

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

**A 94**

Thermal transmittance is a measure of the rate of heat loss through a building element; the lower the value the better the energy performance.

## Low and zero carbon energy sources

The following low or zero carbon energy sources are provided for this home:

- Solar water heating
- Biomass Main heating

## Recommendations

None

## 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 these 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

2 Solar photovoltaic panels, 2.5 kWp	£212	C 77	A 97
3 Wind turbine	£60	C 78	A 98

**Enhanced energy efficiency rating**

**C 78**

**Enhanced environmental impact (CO<sub>2</sub>) rating**

**A 98**

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

Not applicable

## 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.

Building regulations apply to most measures. Building regulations approval and planning consent may be required for some 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.

### 1 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. It is best to obtain advice from a qualified electrician.

Ask the electrician to explain the options.

### 2 Wind turbine

A wind turbine provides electricity from wind energy. This electricity is used throughout the home in the same way as the electricity purchased from an energy supplier. The British Wind Energy Association has up-to-date information on suppliers of small-scale wind systems and any grant that may be available. Planning restrictions may apply 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<sup>1</sup>, and can therefore self-certify the work for Building Regulation compliance. Wind turbines are not suitable for all properties. The system's effectiveness depends on local wind speeds and the presence of nearby obstructions, and a site survey should be undertaken by an accredited installer.

## 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 CO2 emissions. The papers you are given by the builder and the warranty provider will help you in this.
- 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.
- 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.
- Make sure your hot water is not too hot - a cylinder thermostat need not normally be higher than 60°C.
- 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.