Energy Performance Certificates for Homes – the Consumer Perspective

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Background

Energy Performance of Buildings Directive requirements

- An Energy Performance Certificate no less than 10 years old must be made available to the prospective buyer or tenant
- The certificate must show reference values
- It may include a CO_2 emission indicator
- It must also include recommendations for cost effective improvement of the energy performance

The provision of an EPC introduces a new requirement into the property transaction process.

For homes in England and Wales

- For sales of existing dwellings the EPC is being provided as part of a newly introduced “Home Information Pack” – this was to have been effective from 1 June 2007, but on 22 May it was put back to 1 August 2007 (for large dwellings only, with other categories being brought in as the number of certified assessors increases).
- EPCs for other housing sectors will follow (new dwellings from October 2007, rented private sector and social housing from October 2008)

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Scope of the presentation

- The focus of the presentation will be on the front page of the Energy Performance Certificate (EPC) because
  - It is the most important page
  - Its content and format has changed very little since the final draft of the EPC was handed over to DCLG (the content of other pages has actually been re-arranged and is spread over more pages - consequently these look a little different now)
  - Time constraints preclude discussion of the other pages (see the proceedings for the full paper)
  - The findings for the other pages are broadly similar to those for the front page
- The emphasis will be on consumer understanding of, and opinions on, the EPC

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Format of the Energy Performance Certificate used

THIS IS AN EXAMPLE REPORT AND IS NOT BASED ON AN ACTUAL PROPERTY

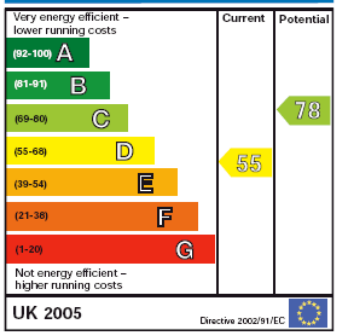
Section H: Energy Performance Certificate

100 Any Street,	Dwelling type:	Detached	Certificate number:	XXXX
Any Town,	Internal floor area:	XXXX	Date issued:	XXXX
Anywhere, AB1 CD2	Date of inspection:	XXXX	Name of inspector:	XXXX

This home's performance ratings

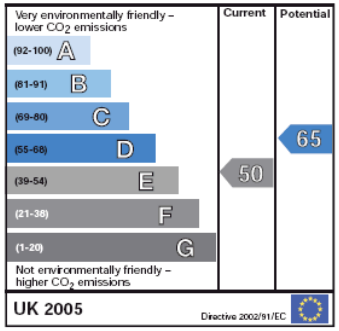
This home has been assessed using the UK's Standard Assessment Procedure (SAP) for dwellings. Its performance is rated in terms of the energy use per square metre of floor area, energy efficiency based on fuel costs and environmental impact based on carbon dioxide (CO_2) emissions.

Energy Efficiency 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.

Environmental Impact (CO_2) Rating



The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide emissions. The higher the rating, the less impact it has.

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

This table provides an indication of how much it will cost to provide lighting, heating and hot water to this home. This information has been provided for comparative purposes only. The fuel costs and carbon dioxide emissions are calculated based on a SAP assessment of the energy use. This makes standard assumptions about occupancy, heating patterns and geographical location.

The energy use includes the energy used in producing and delivering the fuels to this home. The fuel costs only take into account the cost of fuel and not any associated service, maintenance or safety inspection costs.

This certificate allows one home to be directly compared with another, but always check the date the certificate was issued. Since fuel prices can increase over time, an older certificate may underestimate the property's fuel costs.

	Current	Potential
Energy use	xxx kWh/m^2 per year	xxx kWh/m^2 per year
Carbon dioxide emissions	xx tonnes per year	xx tonnes per year
Lighting	£xxx per year	£xxx per year
Heating	£xxx per year	£xxx per year
Hot water	£xxx per year	£xxx per year

To see how this home can achieve its potential rating please go to page ii.

Revised format of the Energy Performance Certificate

Energy Performance Certificate

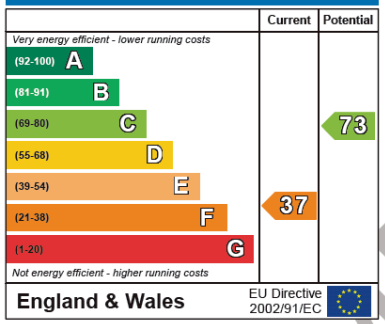
SAP

17 Any Street,
Any Town,
County,
YY3 5XX

Dwelling type:	Detached house
Date of assessment:	02 February 2007
Date of certificate:	[dd mmmm yyyy]
Reference number:	0000-0000-0000-0000-0000
Total floor area:	166 m²

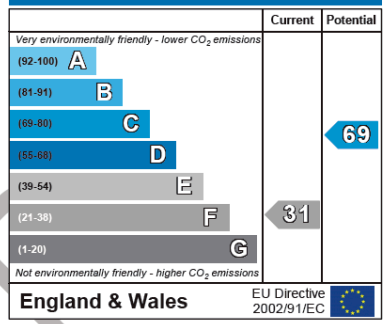
This home's performance is rated in terms of the energy use per square metre of floor area, energy efficiency based on fuel costs and environmental impact based on carbon dioxide (CO_2) emissions.

Energy Efficiency 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.

Environmental Impact (CO_2) Rating



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.

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

	Current	Potential
Energy use	453 kWh/m² per year	178 kWh/m² per year
Carbon dioxide emissions	13 tonnes per year	4.9 tonnes per year
Lighting	£81 per year	£65 per year
Heating	£1173 per year	£457 per year
Hot water	£219 per year	£104 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.

energy saving recommended
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/myhome**

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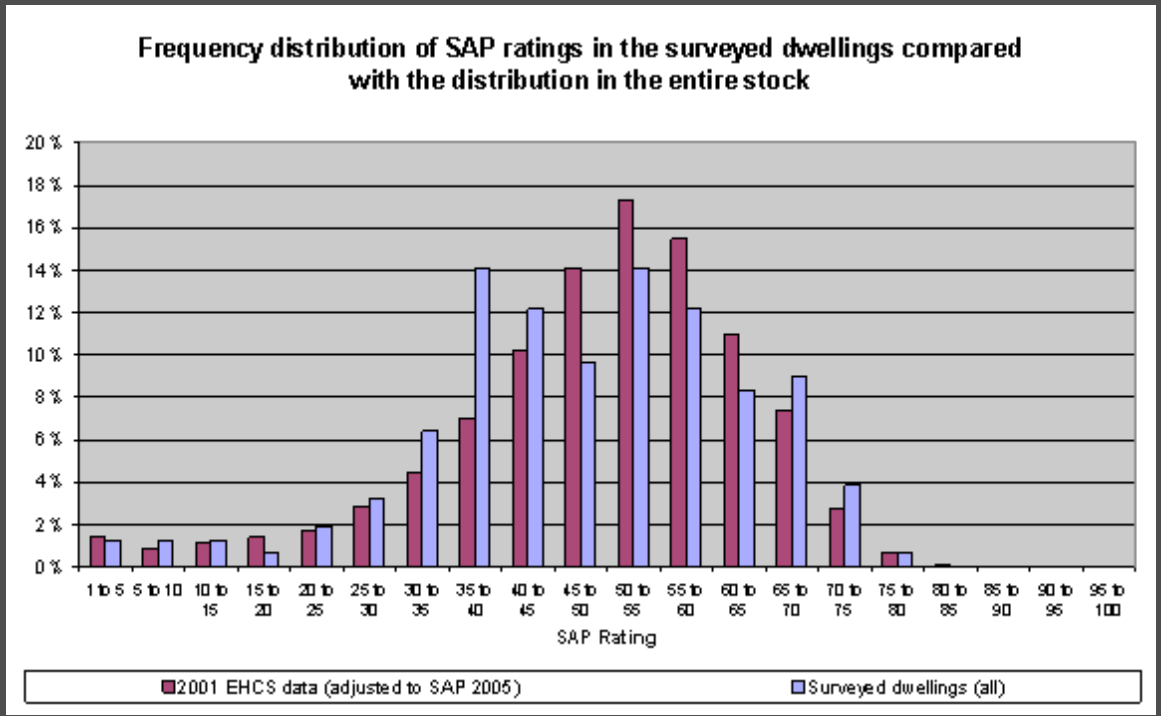
Overview of the study undertaken

- A consumer trial of the proposed EPC undertaken in early 2006
- EPCs for actual sales transactions were provided to home buyers
- 156 surveys were undertaken (i.e. 156 EPCs were produced)
- A wide range of energy efficiency ratings were observed, broadly following the known distribution in the wider stock



Overview of the study undertaken - continued

- Questionnaires were sent to all 156 participants
- The questionnaires tested understanding of the EPC and sought householder views on it
- 64 questionnaires were returned (lower than anticipated given that there was an attractive incentive – a prize draw)
- What follows is based on the analysis of the 64 returned questionnaires

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Did householders understand the ratings?

Table 1. How easy is it to understand the Energy Efficiency Rating chart?

Reported rating		1 Very easy	2	3	4	5 Very difficult	Total
Correct	Count	61	35	11	0	0	107
	%	90%	80%	79%	0%	0%	83%
Incorrect	Count	7	9	3	2	0	21
	%	10%	20%	21%	100%	0%	17%
Total	Count	68	44	14	2	0	128
	%	100%	100%	100%	100%	0%	100%

Table 2. How easy is it to understand the Environmental Impact Rating chart?

Reported rating		1 Very easy	2	3	4	5 Very difficult	Total
Correct	Count	56	34	20	0	0	110
	%	88%	89%	83%	0%	0%	86%
Incorrect	Count	8	4	4	2	0	18
	%	12%	11%	17%	100%	0%	14%
Total	Count	64	38	24	2	0	128
	%	100%	100%	100%	100%	0%	100%

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Did householders understand the ratings?

Table 3. Frequencies of correct and incorrect reporting of rating numbers and letters

	Correct	Incorrect
Energy Efficiency Rating number	87%	13%
Energy Efficiency Rating letter	96%	4%
Environmental Impact Rating number	89%	11%
Environmental Impact Rating letter	97%	3%

- This demonstrates that the A to G bands, which were always intended to be the principal means of conveying the ratings, are very well understood. The underlying 1 to 100 scales are harder for people to understand.
- The presence of two separate ratings (for Energy Efficiency and Environmental Impact) did not appear to hinder understanding. This finding was somewhat contrary to expectations.

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How did householders rate the whole of the front page?

Table 4. Overall, how would you rate the whole of the first page?

Too much information	3%	19%	71%	5%	2%	Too little information
Too much technical detail	0%	16%	70%	13%	2%	Not enough technical detail
Very interesting	29%	41%	27%	2%	2%	Not interesting at all
Very easy to understand	27%	40%	27%	5%	0%	Very difficult to understand
Very useful	32%	37%	25%	6%	0%	Not at all useful

- A good balance was achieved between too much and too little information and between too much and too little technical detail
- Nobody found the page very difficult to understand or not at all useful
- About 70% of householders found the page interesting, easy to understand and useful. About 25% expressed neutral views. Only about 5% found it un-interesting, difficult to understand and not very useful.

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Did householders understand the technical terms used?

Table 5. Understanding of technical terms

Understand	Directive 2002/91/EC	SAP	kWh/m2	Environ-mental Impact Rating	Energy Efficiency Rating	Carbon dioxide (CO_2)
Yes	42%	75%	80%	94%	98%	98%
No	58%	25%	20%	6%	2%	2%

- The terms that it was most important for householders to grasp were generally well understood
- Very technical terms, not really essential to understanding the EPC, were less well understood
- “Directive 2002/91/EC” was by far the least understood term

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Other important findings

- The findings regarding householder understanding and views on the other pages were generally quite similar to those for the first page
- The reported likelihood of households undertaking the low-cost recommended improvements was relatively high (about 70%).
- About 35% indicated they were likely to undertake higher cost improvements (which reduced to about 20% in the case of “further measures” – i.e. improvements that are probably not cost-effective)

If these responses are actually representative of households more generally, they suggest that the EPC will have an impact on improving energy efficiency in the housing stock

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Some householder comments

- *"This report was very useful and will be of help in our new home. Thank you."*
- *"Until your suggestion to conduct this survey I hadn't given much thought to energy performance. The results of the survey have been illuminating. It has clearly shown the areas where the property is weak and what can be done to improve it."*
- *"I found the report very interesting and I will definitely implement some of the recommendations however a low/poor report would not have stopped me purchasing the flat."*

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