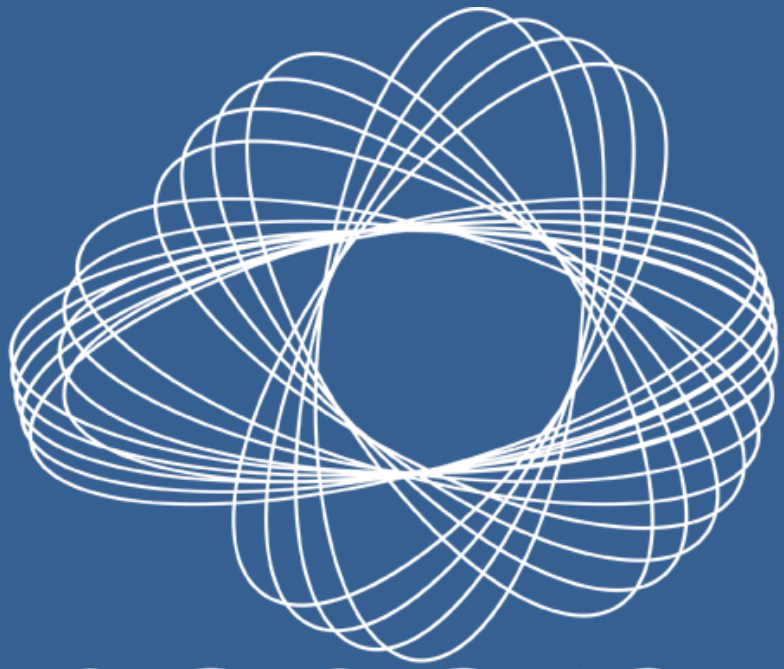

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save money and the environment

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Energy Efficiency in the Private Rented Sector

Rachel Jones

www.actonenergy.org.uk

Why Energy Efficiency

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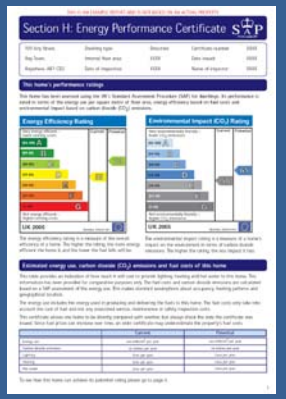
Warmer home, lower bills for tenant
Less voids
Condensation & damp
House Health and Safety Rating System
Energy Performance Certificates



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What energy efficiency measure

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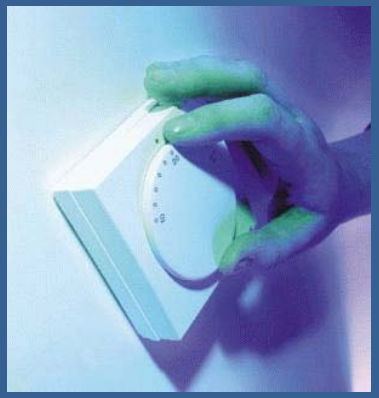

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Energy Performance Certificates

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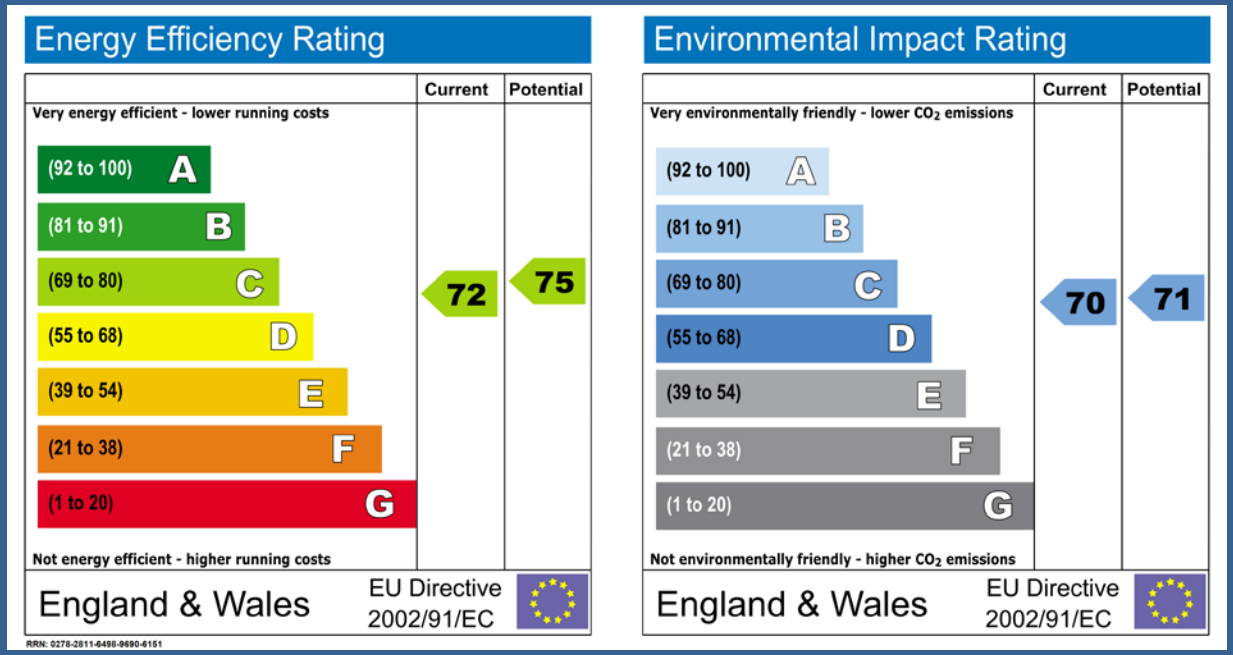

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Energy Performance Certificates

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European Energy Performance of Buildings Directive (EPBD- 2002)

Includes all buildings having walls and roof with conditioned internal space

Cost index for heating, hot water and lighting for typical building

Required on construction, sale or rental of all buildings

Dwellings use RDSAP (reduced data Standard Assessment Procedure)

Non-Dwellings use SBEM (simple building energy model)

Policed by Trading Standards

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2005:- £600

2010:- £1,200

2015:- £2,400?

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UK National Statistics

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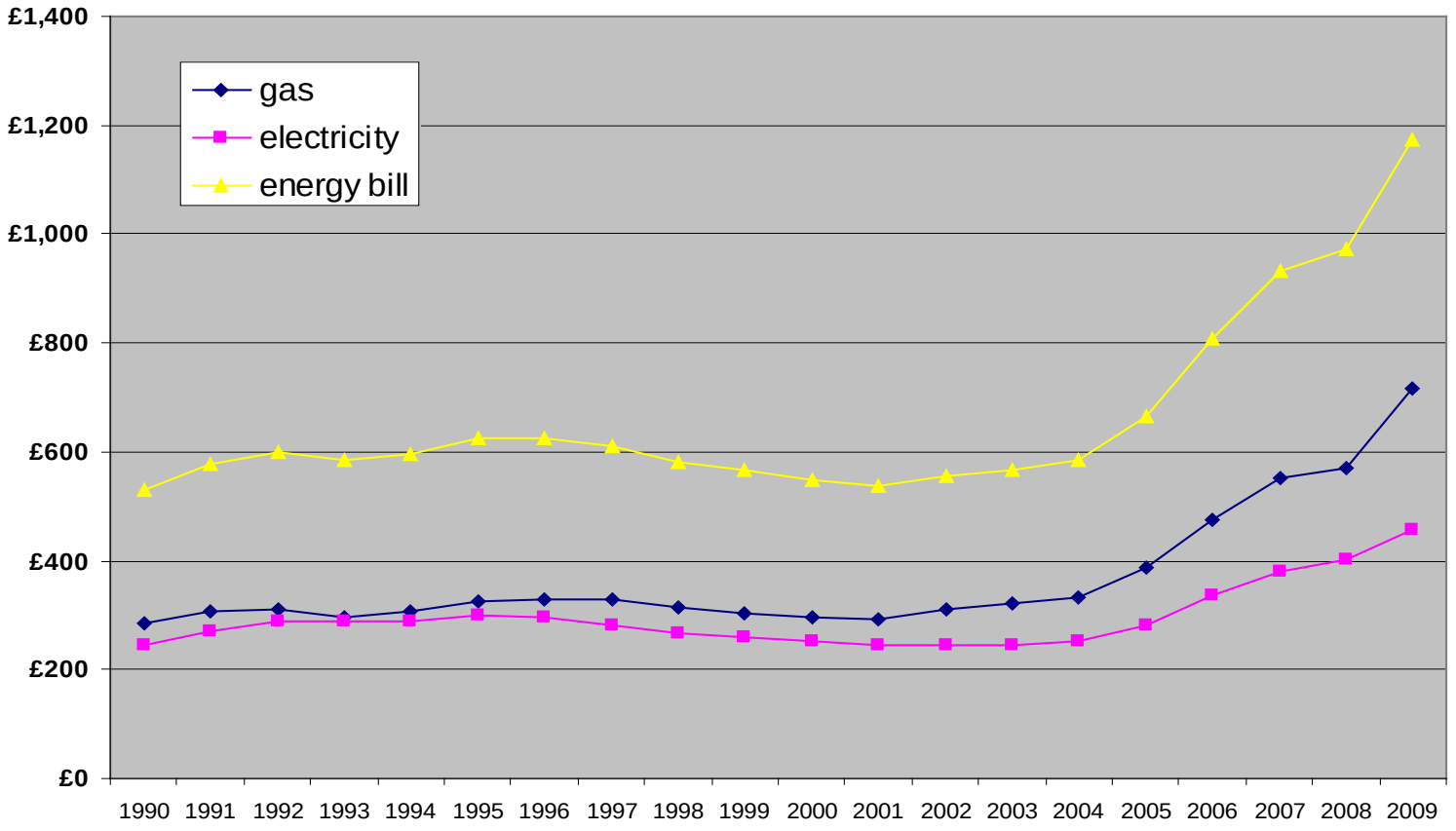
Domestic fuel bills



UK response

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Introduce EPCs with Home Information Packs (HIP) (HIPS are no longer required)

EPCs required on 3 bed homes from June 2007

EPCs for all homes when marketed for sale or rental from October 2008.

From June 2011 will be required on holiday homes that are let for 4 months or more within a given year.

Produced using approved software based on RDSAP methodology

Carried out by registered Domestic Energy Assessors (DEAs)

Certificate valid for 10 years

Non-Dwelling EPC

Required on construction, sale or rental

Includes all commercial, public and industrial buildings that have walls, roof with a conditioned internal space

Includes care homes, student halls of residence, prisons, hotels etc where attendant services are provided and there is no right of exclusive possession of any part of the building

Also includes the shared or communal areas within sheltered housing schemes

Dwelling EPC

Defined as a self contained unit having walls, roof and conditioned internal space but excludes caravans, tents and mobile homes

Also includes self contained dwellings within a larger building but excludes the communal areas which need a NDSAP

A self contained dwelling would have at least one habitable room (living/sleeping space) with its own kitchen and bathroom.

The Standard Assessment Procedure (SAP)

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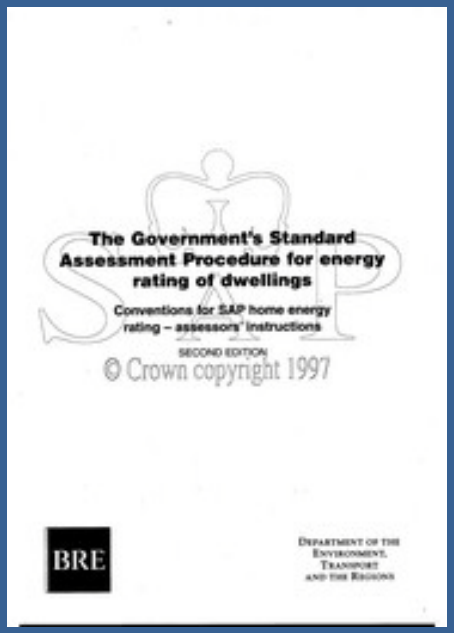
Calculation includes range of factors that contribute to energy efficiency:
· the age, size, type and exposure
· type of construction
· thermal insulation
· ventilation
· type and control of the heating systems
· solar gains through openings
· the fuel used to provide space and water heating
· electrical tariff
· renewable energy technologies



Calculation excludes
· occupation
· electrical appliances
· heating patterns and temperatures
· geographical location

Replaced in Building Regulations 2000 by "Carbon Index Method" but to be reintroduced in 2010

DEA Process

EPCs can only be produced by qualified Domestic Energy Assessors registered with an approved accreditation scheme.

Home survey

Site notes- construction, insulation, heating, lighting

Dimensions- height, areas and perimeter

Photographic evidence

Software

Enter site data

Upload evidence

Finalise and print EPC, energy data and rating label

Keep records for 10 years

Evidence- sketch

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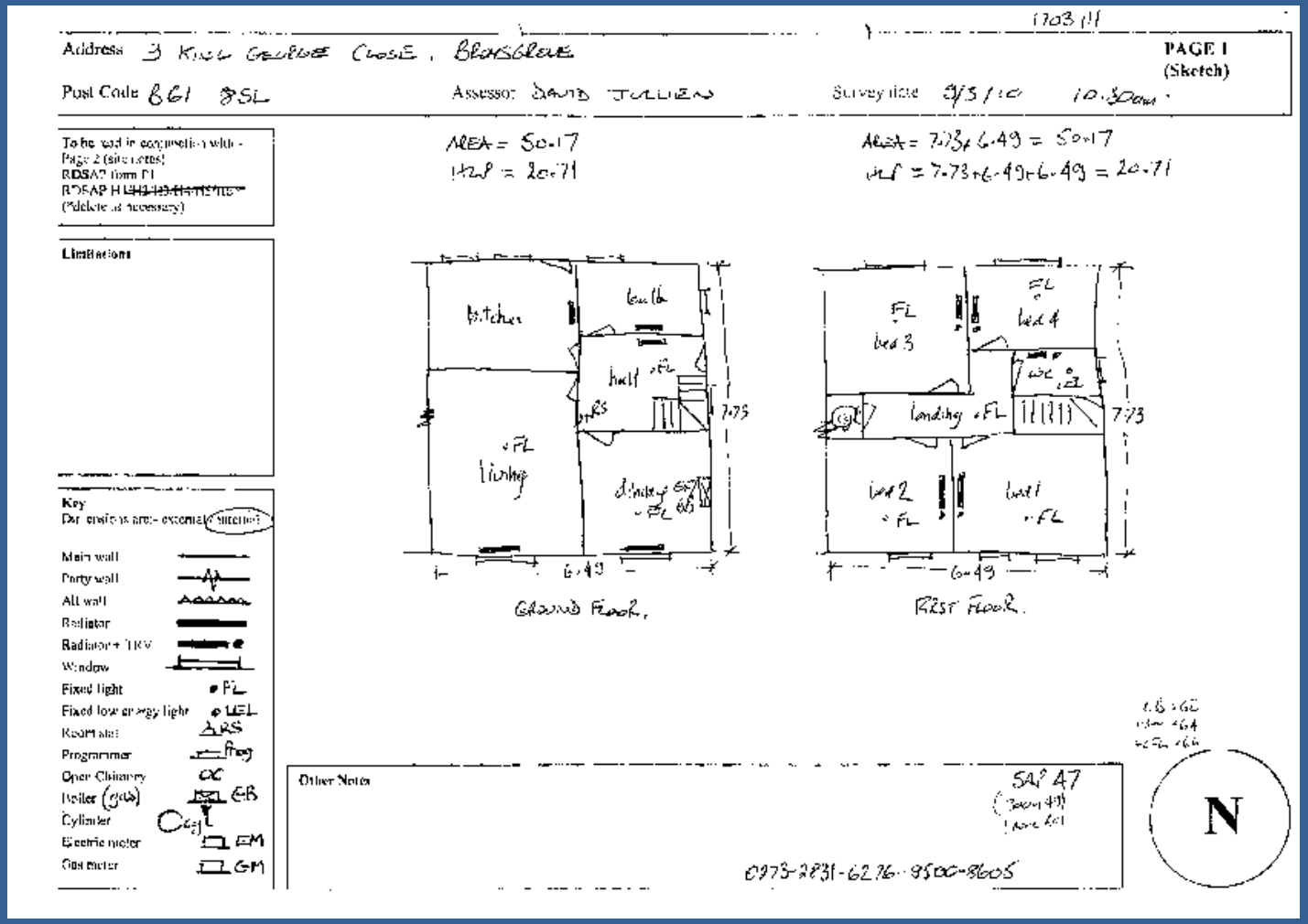

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Evidence- site notes

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Address- 9 KING GEORGE CLOSE

Post Code- BG1 8SL Assessor- David Jullien

Risk Assessment

External					comment
Weather conditions	High	Med	(Low)	n/a	
Lighting conditions	High	Med	(Low)	n/a	
Vehicle and parking	High	Med	(Low)	n/a	
Area	High	Med	(Low)	n/a	
Debris in garden	High	Med	(Low)	n/a	
Falling debris	High	Med	(Low)	n/a	
gas smell	High	Med	(Low)	n/a	
Internal					
Householder	High	Med	Low	(n/a)	
other person	High	Med	Low	(n/a)	
children under 16	High	Med	Low	(n/a)	
animals	High	Med	Low	(n/a)	
electric equipment	High	Med	(Low)	n/a	
vermin	High	Med	(Low)	n/a	
questionable material	High	Med	(Low)	n/a	

External Inspection

Built form	(House)	bungalow	flat	maisonette
Detachment	detached	(semi)	end terr	mid terr
Floor level- flats	of	Other dwelling- above / below		
Main walls	Cavity	(solid)	timber frame	other
Insulation	(no evidence)	drill holes	meter	tapping
	external	internal	flexible lining	
Extension 1	Cavity	solid	timber frame	other
Insulation	no evidence	drill holes	meter	tapping
	external	internal	flexible lining	
Extension 2	Cavity	solid	timber frame	other
Insulation	no evidence	drill holes	meter	tapping
	external	internal	flexible lining	
Alternative wall	Cavity	solid	timber frame	other
Insulation	no evidence	drill holes	meter	tapping
	external	internal	flexible lining	
	Type			
Main roof	(pitched)	flat	room in roof	no roof
Ext 1 roof	pitched	flat	room in roof	no roof
Ext 2 roof	pitched	flat	room in roof	no roof

Survey date- 9/3/10. PAGE 2- (site notes)

Internal Inspection

Number of floors 2		Unheated space- above / below			
Main roof	insulation	(joists)	rafters	no access	no roof
	thickness	50			
Condensation risk		yes	no		
Ext. 1 roof	insulation	joists	rafters	no access	no roof
	thickness				
Condensation risk		yes	no		
Ext. 2 roof	insulation	joists	rafters	no access	no roof
	thickness				
Condensation risk		yes	no		
Electricity	(Single)	dual	unknown	Gas	(yes) no
Other fuel-					
Main heating type-	BACK BOILER / LPG				
Cyl. size	norm	(med)	large	none	no access
Cyl insul.	(foam)	jacket	other	thickness	25
Double Glazing aged by		Fensa	date stamp	2006	no date
House age	1939	owner	neighbour	surveyor	council

ROOM	Habit. room	Rad	Rad + TRV	other heater	Fixed lights	low energy	Total glazing	Double glazing	DG date	Open Chimney	Room stat	Timer	Ceiling height	Wall tapping	Window reveal	Floor	Notes
Living	1	1	–	–	1	–	1	1	pre 2002	–	–	–	2.43	Solid		T	
Dining	1	1	–	GF	1	–	1	1	"	–	–	–	"	"		T	
Study																	
Kitchen/~~Dining~~	–	1	–	–	1	–	3	3	"	–	–	–	"	"		C	
Utility																	
WC																	
Conservatory																	
Hall	–	1	–	–	1	–	1	1	"	–	1	–	"	"		C	
Landing	–	1	–	–	1	–	–	–	–	–	–	1	2.49	"			
Bathroom 1	–	1	–	–	1	–	2	2	"	–	–	–	2.43	"		C	
~~Bathroom 2~~ WC	–	1	1	–	1	1	1	1	"	–	–	–	2.49	"			
Bedroom 1	1	1	1	–	1	–	2	2	"	–	–	–	"	"			
Bedroom 2	1	1	1	–	1	–	1	1	"	–	–	–	"	"			
Bedroom 3	1	1	1	–	1	–	1	1	"	–	–	–	"	"			
Bedroom 4	1	1	1	–	1	–	1	1	"	–	–	–	"	"			
Totals	6	11	5		11	1	14	14									
Percent / average			45			2		100									

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Evidence- photographs

Photographs of 9 King George Close


Front elevation


Gas fire and back boiler


Hot water cylinder with thermostat


TRV


Programmer


Double glazing


Loft insulation


Room thermostat

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The EPC includes

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Energy Efficiency Rating label

Environmental Performance (CO2) rating

Estimate of energy use (kWh/m2/year)

Estimate of CO2 (tonnes/year)

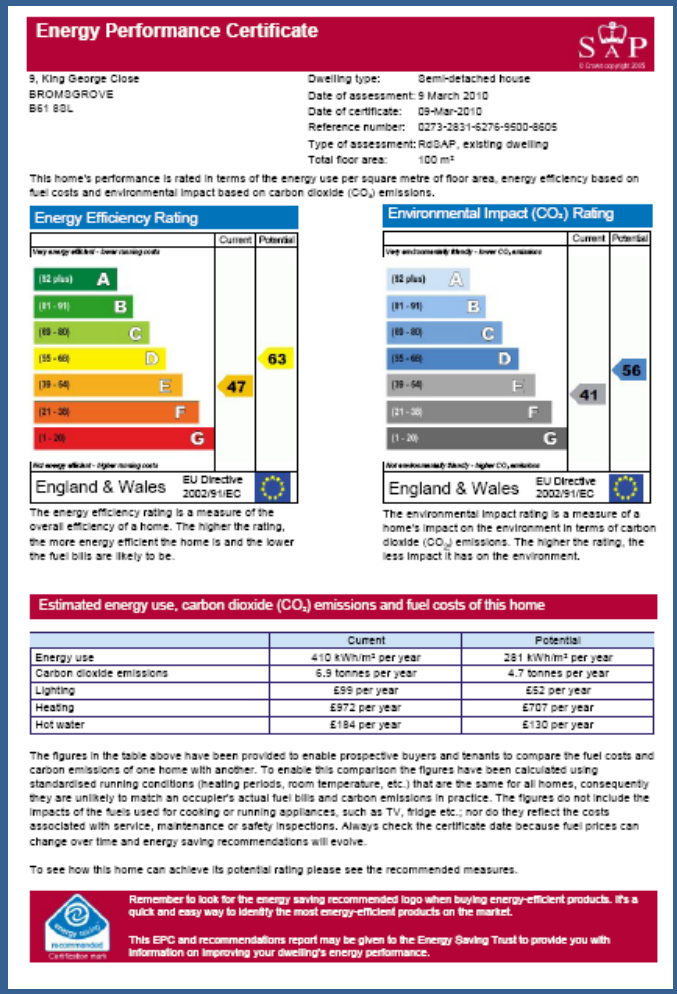
Annual cost of heating, hot water, lighting

Summary of energy efficiency features

Recommendations

Low cost (up to £500)

Higher cost



Energy Performance Certificate

SAP

9, King George Close
BROMSGROVE
B61 8GL

Dwelling type: Semi-detached house
Date of assessment: 9 March 2010
Date of certificate: 09-Mar-2010
Reference number: 0273-2831-6276-9600-8605
Type of assessment: RdSAP, existing dwelling
Total floor area: 100 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

	Current	Potential
(92 plus) A		
(81 - 91) B		
(69 - 80) C		
(55 - 68) D		63
(39 - 54) E	47	
(21 - 38) F		
(1 - 20) G		
England & Wales	EU Directive 2002/91/EC	

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.

Environmental Impact (CO_2) Rating

	Current	Potential
(92 plus) A		
(81 - 91) B		
(69 - 80) C		
(55 - 68) D		56
(39 - 54) E		
(21 - 38) F	41	
(1 - 20) G		
England & Wales	EU Directive 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.

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

	Current	Potential
Energy use	410 kWh/m² per year	281 kWh/m² per year
Carbon dioxide emissions	6.9 tonnes per year	4.7 tonnes per year
Lighting	£99 per year	£52 per year
Heating	£972 per year	£707 per year
Hot water	£184 per year	£130 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 temperature, 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.

To see how this home can achieve its potential rating please see the recommended measures.

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.

This EPC and recommendations report may be given to the Energy Saving Trust to provide you with information on improving your dwelling's energy performance.

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Recommended measures to improve this home's energy performance

9, King George Close
BROMSGROVE
B61 8SL

Date of certificate: 09-Mar-2010
Reference number: 0273-2831-6276-9500-8605

Summary of this home's energy performance related features

The table below gives 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.

Element	Description	Current performance	
		Energy Efficiency	Environmental
Walls	Solid brick, as built, no insulation (assumed)	Very poor	Very poor
Roofs	Pitched, 50mm loft insulation	Poor	Poor
Floor	Suspended, no insulation (assumed)	-	-
Windows	Fully double glazed	Average	Average
Main heating	Boiler and radiators, mains gas	Average	Good
Main heating controls	Programmer and room thermostat	Average	Average
Secondary heating	Room heaters, mains gas	-	-
Hot water	From main system	Average	Good
Lighting	Low energy lighting in 9% of fixed outlets	Very poor	Very poor
Current energy efficiency rating		**E 47**	
Current environmental impact (CO_2) rating			**E 41**

Low and zero carbon energy sources

None

Recommendations

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.

Lower cost measures (up to £500)	Typical savings per year	Performance ratings after improvements	
		Energy efficiency	Environmental impact
1 Increase loft insulation to 270 mm	£56	E 49	E 43
2 Low energy lighting for all fixed outlets	£34	E 51	E 43
3 Upgrade heating controls	£35	E 52	E 45
Sub-total	£125		
Higher cost measures			
4 Replace boiler with Band A condensing boiler	£240	D 63	D 56
Total	£365		
Potential energy efficiency rating		**D 63**	
Potential environmental impact (CO_2) rating			**D 56**

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. However you should check the conditions in any covenants, planning conditions, warranties or sale contracts.

	Typical savings per year	Performance ratings after improvements	
		Energy efficiency	Environmental impact
5 Solar water heating	£29	D 65	D 58
6 50 mm internal or external wall insulation	£228	C 75	C 72
7 Solar photovoltaic panels, 2.5 kWp	£172	B 84	C 80
Enhanced energy efficiency rating		**B 84**	
Enhanced environmental impact (CO_2) rating			**C 80**

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_2) emissions.

Example 1- 1954 2 bed semi detached house 64m2

(cavity brick walls with gas back boiler)

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As built	SAP30		cost per 1 SAP	
250mm loft insulation	SAP36	(+6 points)	£25	(@ £150)
Double glazing	SAP40	(+4 points)	£1,500	(@ £6,000)
Cavity wall insulation	SAP49	(+9 points)	£16	(@ £150)
Seal chimneys	SAP50	(+1 points)	£100	(@£100)
HE gas boiler + controls	SAP62	(+12 points)	£108	(@4,000)
Cylinder insulation	SAP74	(+12 points)	£1	(@ £12)
Solar water heating	SAP75	(+1 points)	£4,000	(@ £4,000)
Low energy lights	SAP77	(+2 points)	£10	(@ £20)
PV panels	SAP80	(+3 points)	£5,000	(@ £15,000)

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Example 2- 1986 2 bed end terrace house 65m2

(cavity wall with storage heaters)

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As built	SAP49		cost per 1 SAP	
300mm loft insulation	SAP52	(+3 points)	£50	(@ £150)
Cavity wall insulation	SAP57	(+5points)	£30	@ £150
New Double glazing	SAP59	(+2 points)	£2,000	(@ £4,000)
Solar water heating	SAP62	(+3 points)	£1,333	(@ £4,000)
Low energy lights	SAP64	(+2 points)	£10	(@ £20)
PV panels	SAP67	(+3 points)	£5,000	(@ £15,000)
Fan storage heaters	SAP73	(+6 points)	£333	(@2,000)
Or HE gas boiler	SAP81	(+14 points)	£357	(@5,000)
Or GS heat pump	SAP71	(+4 points)	£2,000	(@8,000)

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Funding Available to Install Measures

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Grants –CERT （Carbon Emission Reduction Target）

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Energy suppliers are offering grants towards the cost of energy efficiency measures

Grants usually subsidise the measures e.g. 50% of the costs

Suppliers will offer **priority groups （over 70's and benefit recipients） 100% grants** to cover the costs of installing energy efficiency measures （must have less than 60mm in loft to qualify for grant aid） **FUNDING FOR THIS IS BECOMING LIMITED**

Work with social landlords to improve properties

Grants cover:

Insulation e.g. loft insulation, cavity wall insulation

Renewables （predominantly for social schemes）

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Warm Front

The new eligibility criteria will combine extreme financial disadvantage, vulnerability and poor or modest standards of energy efficiency. Eligible households must:

1. Receive one of a range of means-tested benefits and
2. Be vulnerable on grounds of age (over 60 or with a child under 5) or with some form of disability and
3. Occupy a private sector dwelling with an energy efficiency rating of SAP 55 or below

Warmfront can be contacted on 0800 316 2805

www.actonenergy.org.uk

The Green Deal - 2012

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What is the Green Deal

- Provides for energy efficiency improvements at no upfront cost
- A market mechanism, funded by private capital
- Consumers can pay back through savings on their energy bills
- The Golden Rule...

Warm Front and Landlords

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- As of 15th September 2009 private tenants can receive heating repairs and replacements on existing heating systems.
- Landlords permission is required
- Technical surveys are carried out by WF registered installers and heating quotes are sent and approved by Warm Front.
- There are inspections and an aftercare package for heating work

Obtaining an Energy Performance Certificate

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Energy Performance Certificates (EPCs) can only be provided by an accredited domestic energy assessor or a certified home inspector.

Once your property has been given an EPC, it gets a unique number and is registered on a national database by the assessor. You can download extra copies by using the report reference number on the top right-hand side of the certificate.

If you have recently bought a property, an EPC should have been included in its Home Information Pack.

To find a registered assessor visit the Land Mark Website.

www.hcrregister.com

www.epcregister.com

Landmark Information Group

Home

- Home
- Find Assessor / Inspector
- Report Retrieval
- Lodgement Statistics
- Accreditation Scheme Annual Reports
- Lost Report Reference Number
- Latest News
- FAQ
- EPC Public Enquiry Help Desk
- Information

Authorised Users

Welcome to the Energy Performance Certificate and Home Condition Report Registers

From 14 December 2007 most properties marketed for sale in England and Wales need a Home Information Pack.

The Energy Performance Certificate is a mandatory component of the Home Information Pack and provides details on the energy performance of the property and what you can do to improve it. The Home Condition Report is an optional component that provides details on the condition of the property that is for sale.

This website will allow you to:

- Find a Domestic Energy Assessor or Home Inspector.

  Click here to find an accredited person to undertake an Energy Performance Certificate or Home Condition Report or to check that an individual is accredited.

- Retrieve an Energy Performance Certificate or Home Condition Report

  Click here to retrieve an Energy Performance Certificate or Home Condition Report.

The Energy Performance Certificate and Home Condition Report Registers are operated by Landmark on behalf of the Government

Communities and Local Government

Landmark Information Group

- Home
- Find Assessor / Inspector
- Report Retrieval
- Lodgement Statistics
- Accreditation Scheme Annual Reports
- Lost Report Reference Number
- Latest News
- FAQ
- EPC Public Enquiry Help Desk
- Information

- Authorised Users

Find a Domestic Energy Assessor, SAP Domestic Energy Assessor or Home Inspector

This page assists you in finding an accredited person to undertake an Energy Performance Certificate or Home Condition Report or to check that an individual is accredited. Domestic Energy Assessors can produce Energy Performance Certificates and Home Inspectors can produce both Home Condition Reports and Energy Performance Certificates.

Due to the Data Protection Act, full contact details of accredited Domestic Energy Assessors or Home Inspectors are only available if the individual has consented for these details (such as telephone number or postcode coverage) to be used in this register. As Domestic Energy Assessors and Home Inspectors become accredited their details will be added to the register.

To find an accredited person to undertake an Energy Performance Certificate, a SAP Energy Performance Certificate, or Home Condition Report, please enter your search criteria below:

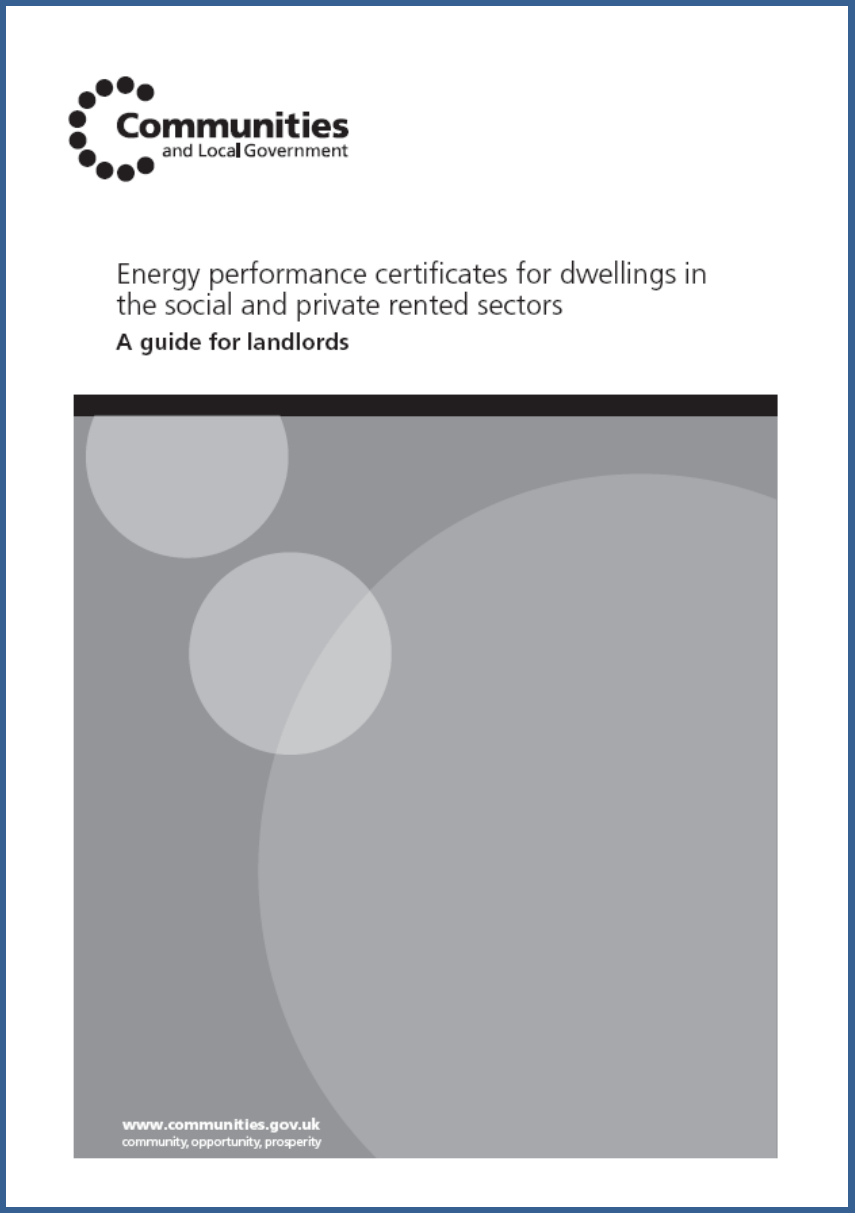
If you are using the "Find Nearest Energy Assessor" search, please first enter the full postcode of the property requiring an assessment into the "Full Postcode of Property" box. Please note that the find nearest assessor search is independent of the "Search by Assessor/Inspector" and all other search criteria, with the exception of the "Report Required" selection.

Report Required:	Energy Performance Certificate	
Accreditation/Certification Number:		(Full number required)
Forename:		(Minimum of 1 character plus surname required)
Surname:		(Minimum of 2 characters required)
Postcode Coverage (e.g. BA, BA2):		(Enter a complete or partial postcode)
Sounds Like:	☐ Tick this box to enable "Sounds Like" searching of 'Surnames' or 'First Names and Surnames'	

Search by Assessor/Inspector

Report Required:	Home Condition Report
Full Postcode of Property:	

Find Nearest Energy Assessor



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Guide available from :

www.communities.gov.uk

www.actonenergy.org.uk

Thank You

Rachel Jones

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0800 988 2881

www.actonenergy.org.uk