Energy Performance Certificate

Non-Domestic Building

HM Government

23 Palace Street
BOLTON
BL1 2DR

Certificate Reference Number:
0562-3040-0519-0890-9301

This certificate shows the energy rating of this building. It indicates the energy efficiency of the building fabric and the heating, ventilation, cooling and lighting systems. The rating is compared to two benchmarks for this type of building: one appropriate for new buildings and one appropriate for existing buildings. There is more advice on how to interpret this information on the Government's website www.communities.gov.uk/epbd.

Energy Performance Asset Rating

More energy efficient

A+

Net zero CO_2 emissions

A 0-25

B 26-50

C 51-75

D 76-100

E 101-125

F 126-150

G Over 150

115 **This is how energy efficient the building is.**

Less energy efficient

Technical information

Main heating fuel:	Natural Gas
Building environment:	Heating and Natural Ventilation
Total useful floor area (m^2):	120
Building complexity (NOS level):	3

Benchmarks

Buildings similar to this one could have ratings as follows:

38 If newly built

75 If typical of the existing stock

Administrative information

This is an Energy Performance Certificate as defined in SI2007:991 as amended

Assessment Software:	Carbon Checker v1.4 using calculation engine SBEM v3.4.a
Property Reference:	529538460000
Assessor Name:	Andrew Allmark
Assessor Number:	STRO000885
Accreditation Scheme:	Stroma Accreditation Ltd
Employer/Trading Name:	Lamb and Swift Commercial
Employer/Trading Address:	Direct House, Lancaster Way, Wingates Industrial Park, Bolton, BL5 3XD
Issue Date:	21 Oct 2009
Valid Until:	20 Oct 2019 (unless superseded by a later certificate)
Related Party Disclosure:	We note that Lamb and Swift Commercial have a commercial interest in this property.

Recommendations for improving the property are contained in Report Reference Number: 0950-0841-6590-2400-3092

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 certificate. You can get contact details of the accreditation scheme from the Government's website at www.communities.gov.uk/epbd, together with details of the procedures for confirming authenticity of a certificate and for making a complaint.

CARBON TRUST

For advice on how to take action and to find out about technical and financial assistance schemes to help make buildings more energy efficient visit **www.carbontrust.co.uk** or call us on **0800 085 2005**

Recommendation Report

HM Government

Report Reference Number: 0950-0841-6590-2400-3092

23 Palace Street
BOLTON
BL1 2DR

Building Type(s): Office

ADMINISTRATIVE INFORMATION	
Issue Date:	21 Oct 2009
Valid Until:	20 Oct 2019 (*)
Total Useful Floor Area (m^2):	120
Calculation Tool Used:	Carbon Checker v1.4 using calculation engine SBEM v3.4.a
Property Reference:	529538460000
Energy Performance Certificate for the property is contained in Report Reference Number: 0562-3040-0519-0890-9301	

ENERGY ASSESSOR DETAILS	
Assessor Name:	Andrew Allmark
Employer/Trading Name:	Lamb and Swift Commercial
Employer/Trading Address:	Direct House, Lancaster Way, Wingates Industrial Park, Bolton, BL5 3XD
Assessor Number:	STRO000885
Accreditation scheme:	Stroma Accreditation Ltd
Related Party Disclosure:	We note that Lamb and Swift Commercial have a commercial interest in this property.

(*) Unless superseded by a later recommendation report

Table of Contents

1. Background

Statutory Instrument 2007 No. 991, *The Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007*, as amended, transposes the requirements of Articles 7.2 and 7.3 of the Energy Performance of Buildings Directive 2002/91/EC.

This report is a Recommendation Report as required under regulations 16(2)(a) and 19 of the Statutory Instrument SI 2007:991.

This section provides general information regarding the building:

Total Useful Floor Area (m^2):	120
Building Environment:	Heating and Natural Ventilation

2. Introduction

This Recommendation Report was produced in line with the Government's approved methodology and is based on calculation tool Carbon Checker v1.4 using calculation engine SBEM v3.4.a .

In accordance with Government's current guidance, the Energy Assessor did undertake a walk around survey of the building prior to producing this Recommendation Report.

3. Recommendations

The following sections list recommendations selected by the energy assessor for the improvement of the energy performance of the building. The recommendations are listed under four headings: short payback, medium payback, long payback, and other measures.

a) Recommendations with a short payback

This section lists recommendations with a payback of less than 3 years:

Recommendation	Potential impact
Replace tungsten GLS lamps with CFLs: Payback period dependent on hours of use.	LOW
Consider replacing T8 lamps with retrofit T5 conversion kit.	HIGH
Some spaces have a significant risk of overheating. Consider solar control measures such as the application of reflective coating or shading devices to windows.	MEDIUM
Introduce HF (high frequency) ballasts for fluorescent tubes: Reduced number of fittings required.	LOW

b) Recommendations with a medium payback

This section lists recommendations with a payback of between 3 and 7 years:

Recommendation	Potential impact
Consider replacing heating boiler plant with a condensing type.	HIGH
Carry out a pressure test, identify and treat identified air leakage. Enter result in EPC calculation.	MEDIUM

c) Recommendations with a long payback

This section lists recommendations with a payback of more than 7 years:

Recommendation	Potential impact
Some floors are poorly insulated - introduce and/or improve insulation. Add insulation to the exposed surfaces of floors adjacent to underground, unheated spaces or exterior.	MEDIUM

Consider installing solar water heating.	LOW

d) Other recommendations

This section lists other recommendations selected by the energy assessor, based on an understanding of the building, and / or based on a valid existing energy report.

No recommendations defined by the energy assessor have been identified

4. Next steps

a) Your Recommendation Report

As the building occupier, regulation 10(1) of SI 2007:991 requires that an Energy Performance Certificate *"must be accompanied by a recommendation report".*

You must be able to produce a copy of this Recommendation Report within seven days if requested by an Enforcement Authority under regulation 39 of SI 2007:991.

This Recommendation Report has also been lodged on the Government's central register. Access to the report, to the data used to compile the report, and to previous similar documents relating to the same building can be obtained by request through the Non-Dwellings Register (www.epcregister.com) using the report reference number of this document.

b) Implementing recommendations

The recommendations are provided as an indication of opportunities that appear to exist to improve the building's energy efficiency.

The calculation tool has automatically produced a set of recommendations, which the Energy Assessor has reviewed in the light of his / her knowledge of the building and its use. The Energy Assessor may have comments on the recommendations based on his / her knowledge of the building and its use. The Energy Assessor may have inserted additional measures in section 3d (Other Recommendations). He / she may have removed some automatically generated recommendations or added additional recommendations.

These recommendations do not include matters relating to operation and maintenance which cannot be identified from the calculation procedure.

c) Legal disclaimer

The advice provided in this Recommendation Report is intended to be for information only. Recipients of this Recommendation Report are advised to seek further detailed professional advice before reaching any decision on how to improve the energy performance of the building.

d) Complaints

Details of the assessor and the relevant accreditation scheme are on this report and the energy performance certificate. You can get contact details of the accreditation scheme from our website at www.communities.gov.uk/epbd, together with details of their procedures for confirming authenticity of a certificate and for making a complaint.

5. Glossary

a) Payback

The payback periods are based on data provided by Good Practice Guides and Carbon Trust energy survey reports and are average figures calculated using a simple payback method. It is assumed that the source data is correct and accurate using up to date information.

The figures have been calculated as an average across a range of buildings and may differ from the actual payback period for the building being assessed. Therefore, it is recommended that each suggested measure be further investigated before reaching any decision on how to improve the energy efficiency of the building.

b) Carbon impact

The High / Medium / Low carbon impact indicators against each recommendation are provided to distinguish, between the suggested recommendations, those that would have most impact on carbon emissions from the building. For automatically generated recommendations, the carbon impact indicators are determined by software, but may have been adjusted by the Energy Assessor based on his / her knowledge of the building. The impact of other recommendations are determined by the assessor.

c) Valid report

A valid report is a report that has been:

- Produced within the past 10 years
- Produced by an Energy Assessor who is accredited to produce Recommendation Reports through a Government Approved Accreditation Scheme
- Lodged on the Register operated by or on behalf of the Secretary of State.

NICEIC APPROVED CONTRACTOR

This certificate is not valid if the serial number has been defaced or altered DCN5/ 0918231

This safety certificate is an important and valuable document which should be retained for future reference

DOMESTIC ELECTRICAL INSTALLATION CERTIFICATE

Issued in accordance with *British Standard 7671 – Requirements for Electrical Installations* by an Approved Contractor or Conforming Body enrolled with NICEIC, Warwick House, Houghton Hall Park, Houghton Regis, Dunstable LU5 5ZX

Original (To the person ordering the work)

DETAILS OF THE CLIENT

Client and address: OSCAR DEVELOPMENTS
ORCHARD LODGE
9A GREENMOUNT LANE
BOLTON
Postcode BL1 5JF.

ADDRESS OF THE INSTALLATION

Installation address: 23 PALACE ST.
BOLTON
Postcode BL1 2DR.

DETAILS OF THE INSTALLATION

Extent of the installation work covered by this certificate: NEW CONSUMER UNIT, KITCHEN SOCKETS AND UPSTAIRS BATHROOM LIGHTS AND FAN.

The installation is: New [ ] An addition [✓] An alteration [ ]

DESIGN, CONSTRUCTION, INSPECTION AND TESTING

I/we, being the person(s) responsible for the design, construction, inspection and testing of the electrical installation (as indicated by my/our signature adjacent), particulars of which are described above, having exercised reasonable skill and care when carrying out the design, construction, inspection and testing, hereby CERTIFY that the said work for which I/we have been responsible is, to the best of my/our knowledge and belief, in accordance with BS 7671, 2008 amended to (date) except for the departures, if any, detailed as follows.

Details of departures from BS 7671, as amended (Regulations 120.3, 120.4)

NONE.

The extent of liability of the signatory is limited to the work described above as the subject of this certificate. For the **DESIGN**, the **CONSTRUCTION** and the **INSPECTION AND TESTING** of the installation

Signature T.S Attwood Name (CAPITALS) T.S-ATTWOOD Date 8-9-10

The results of the inspection and testing reviewed by the Qualified Supervisor

Signature T.S-Attwood Name (CAPITALS) T.S-ATTWOOD Date 8-9-10

PARTICULARS OF THE APPROVED CONTRACTOR

Trading title: WOODGATE ELECTRICAL SERVICES LTD.

Address: 1. ACRESDALE
LOSTOCK
BOLTON

Telephone No 07929064905 Postcode BL6 4PS

NICEIC Enrolment No (Essential information) 0 4 1 9 1 1 Branch No (if applicable)

NEXT INSPECTION

§ Enter interval in terms of years, months or weeks, as appropriate

I RECOMMEND that this installation is further inspected and tested after an interval of not more than § 10 YRS

COMMENTS ON EXISTING INSTALLATION

Note: Enter 'NONE' or, where appropriate, the page number(s) of additional page(s) of comments on the existing installation

NONE.

In the case of an alteration or additions see Section 633 of BS 7671

SCHEDULE OF ADDITIONAL RECORDS*

See attached schedule

** Where the electrical work to which this certificate relates includes the installation of a fire alarm system and/or an emergency lighting system (or a part of such systems), this electrical safety certificate should be accompanied by the particular certificate(s) for the system(s)*

This form is based on the model Electrical Installation Certificate shown in Appendix 6 of BS 7671 (as amended).

Please see the 'Notes for Recipients' on the reverse of this page.

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DOMESTIC ELECTRICAL INSTALLATION CERTIFICATE

Original (To the person ordering the work)

SUPPLY CHARACTERISTICS

Tick boxes and enter details, as appropriate

System type(s)

TN-S	✓
TN-C-S	
TT	

Number and type of live conductors

1-phase (2 wire)		1-phase (3 wire)	✓
3-phase (3 wire)		3-phase (4 wire)	
Other	Please state		

Nature of supply parameters *Notes: (1) by enquiry (2) by enquiry or by measurement (3) where more than one supply, record the higher or highest values*

Nominal voltage(s) $U^{(1)}$	230 V	Nominal frequency, $f^{(1)}$	50 Hz
$U_o^{(1)}$	240 V	External earth fault loop impedance, $Z_e^{(1)}$	0.8 Ω
Single-phase Prospective fault current, $I_{pf}^{(2)(3)}$	kA	**3-phase** Prospective fault current, $I_{pf}^{(2)(3)}$	kA

Characteristics of primary supply overcurrent protective device(s)

BS(EN)	1361		
Type	2		
Rated current	100 A	Short-circuit capacity	kA

PARTICULARS OF INSTALLATION AT THE ORIGIN

Tick boxes and enter details, as appropriate

Means of earthing

Distributor's facility	✓
Installation earth electrode	

Details of installation earth electrode (where applicable)

Type (eg rod(s), tape etc): Location:

Electrode resistance, R_A: Ω Method of measurement:

Measured Z_s: 0.18 Ω

Protective measures for fault protection: A.D.S.

Maximum demand (Load): 60 kVA/Amps *Delete as appropriate*

Number of smoke alarms: 4 ‡

Main switch or circuit-breaker

Type BS(EN):	60439-3	Voltage rating:	230 V
No of poles:	2	Rated current, I_n:	100 A
Supply conductors material:	COPPER	RCD operating current, $I_{\Delta n}$:	mA
Supply conductors csa:	25 mm²	RCD operating time (at $I_{\Delta n}$)*:	ms

* *applicable only where an RCD is used as a main circuit-breaker*

Earthing conductor

Conductor material:	COPPER		
Conductor csa:	16 mm²	Continuity check:	✓✓

Main protective bonding conductors and bonding of extraneous-conductive-parts (✓)

Conductor material:	COPPER	Conductor csa:	10 mm²	Water service:	✓	Oil service:		Gas service:	✓
Location (where not obvious):				Structural steel:		Other incoming service(s):	

SCHEDULE OF ITEMS INSPECTED

†*See note below*

Protective measures against electric shock

Basic and fault protection

Extra low voltage — N/A SELV

Double or reinforced insulation

✓ Double or reinforced insulation

Basic protection

✓ Insulation of live parts ✓ Barriers or enclosures

Fault protection

Automatic disconnection of supply

✓ Presence of earthing conductor
✓ Presence of circuit protective conductors
✓ Presence of main protective bonding conductors
✓ Choice and setting of protective devices (for fault protection and/or overcurrent)

Electrical separation

✓ For **one** item of current-using equipment

Additional protection

✓ Presence of residual current device(s)
✓ Presence of supplementary bonding conductors

Prevention of mutual detrimental influence

✓ Proximity of non-electrical services and other influences
✓ Segregation of Band I and Band II circuits or Band II insulation used
✓ Segregation of safety circuits

Identification

✓ Presence of diagrams, instructions, circuit charts and similar information
✓ Presence of danger notices
✓ Presence of other warning notices, including presence of mixed wiring colours
✓ Labelling of protective devices, switches and terminals
✓ Identification of conductors

Cables and conductors

✓ Selection of conductors for current carrying capacity and voltage drop
✓ Erection methods

Cables and conductors *(cont)*

✓ Routing of cables in prescribed zones
✓ Cables incorporating earthed armour or sheath or run in an earthed wiring system, or otherwise protected against nails, screws and the like
✓ Additional protection by 30mA RCD (where required, in premises not under the supervision of skilled or instructed persons)
✓ Connection of conductors
✓ Presence of fire barriers, suitable seals and protection against thermal effects

General

✓ Presence and correct location of appropriate devices for isolation and switching
✓ Adequacy of access to switchgear and other equipment
✓ Particular protective measures for special installations and locations
✓ Connection of single-pole devices for protection or switching in line conductors only
✓ Correct connection of accessories and equipment
✓ Selection of equipment and protective measures appropriate to external influences
✓ Selection of appropriate functional switching devices

SCHEDULE OF ITEMS TESTED

✓ External earth fault loop impedance, Z_e
N/A Installation earth electrode resistance, R_A
✓ Continuity of protective conductors
✓ Continuity of ring final circuit conductors
✓ Insulation resistance between live conductors
✓ Insulation resistance between live conductors and earth
✓ Polarity
✓ Earth fault loop impedance, Z_s
N/A Verification of phase sequence
✓ Operation of residual current device(s)
✓ Functional testing of assemblies
✓ Verification of voltage drop

†*See note below*

† ***All boxes must be completed.*** *'✓' indicates that an inspection or a test was carried out an[illegible] the result was **satisfactory**. 'N/A' indicates that an inspection or test was nc[illegible]**icable** to the particular installation.*

‡ *Where a smoke alarm has been installed, separate certification is required on the appropri[illegible]orm.*

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DOMESTIC ELECTRICAL INSTALLATION CERTIFICATE

Original (to the person ordering the work)

CIRCUIT DETAILS

TEST RESULTS

Circuit number	Circuit designation * To be completed only where this consumer unit is remote from the origin of the installation. Record details of the circuit supplying this consumer unit in the bold box.	D = Distribution circuit F = Final circuit	Type of wiring (see Code)	Reference method (see Appendix 4 of BS 7671)	Number of points served	Circuit conductors: csa Live mm²	csa cpc mm²	Max. disconnection time permitted by BS 7671 s	Overcurrent protective devices: BS (EN)	Type No	Rating A	Capacity kA	RCD: Operating current $I_{\Delta n}$ mA	Maximum Z_s permitted by BS 7671 Ω	Circuit impedances (Ω): Ring final circuits only (measured end to end) r_1 Line	r_n Neutral	r_2 cpc	All circuits (at least one column to be completed) $R_1 + R_2$	R_2	Insulation resistance: Live/Live MΩ	Live/Neutral MΩ	Live/Earth MΩ	Neutral/Earth MΩ	Polarity ✓	Maximum measured earth fault loop impedance, Z_s Ω	RCD operating times: at $I_{\Delta n}$ ms	at 5 $I_{\Delta n}$ (if applicable) ms
*																											
1	GROUND FLOOR SOCKETS	F	A	101	10	2.5	1.5	.4	60898	B	32	6	30	1.44	0.77	0.78	1.21	0.49		999	999	999	✓	0.67	35.3	13.2
2	BASEMENT SOCKET	F	A	101	1	2.5	1.5	.4	60898	B	16	6	30	2.88				0.1		999	999	999	✓	0.2	35.3	13.2
3	BOILER	F	A	101	1	1.5	1.0	.4	60898	B	6	6	30	7.66				0.39		999	999	999	✓	0.6	35.3	13.2
4	UPSTAIRS LIGHTS	F	A	101	10	1.0	1.0	.4	60898	C	6	10	30	3.83				1.19		999	999	999	✓	1.4	35.3	13.2
5																											
6	UP SOCKETS + KITCHEN	F	A	101	11	2.5	1.5	.4	60898	B	32	6	30	1.44	0.67	0.66	1.03	0.43		999	999	999	✓	0.61	35.8	12.1
7	SMOKES	F	A	101	4	1.5	1.0	.4	60898	C	6	10	30	3.83				1.31		999	999	999	✓	1.5	35.8	12.1
8	DOWNSTAIRS LIGHTS	F	A	101	10	1.0	1.0	.4	60898	C	6	10	30	3.83				1.42		999	999	999	✓	1.6	35.8	12.1
9	ALARM	F	A	101	1	1.0	1.0	.4	60898	B	6	6	30	7.66				0.1		999	999	999	✓	0.21	35.8	12.1
10																											

CODES FOR TYPE OF WIRING: A PVC/PVC cables; B PVC cables in metallic conduit; C PVC cables in non-metallic conduit; D PVC cables in metallic trunking; E PVC cables in non-metallic trunking; F PVC/SWA cables; G XLPE/SWA cables; H Mineral-insulated cables; O (Other – please state)

Location of consumer unit(s) BASEMENT

Designation of consumer unit(s) LIGHTS + POWER

Prospective fault current at consumer unit(s) 1.4 kA

TEST INSTRUMENTS

Test instruments (serial numbers) used

Multi-functional

Insulation resistance 243521

Continuity 243521

Earth electrode resistance

Earth fault loop impedance 243520

RCD 243519

DCN5/3