



A LandAmerica Company

Building and Project Consultants

ENERGY PERFORMANCE CERTIFICATE

WESTMEAD HOUSE FARNBOROUGH HAMPSHIRE



Date: October 2008

Ref: 08.2341/AL/NC

Report Prepared by: Andrew Land

Report Checked by: Andrew Tee

Issuing Office:

CNP
Maddox House
117-119 Edmund Street
Birmingham
B3 2HJ

For and on behalf of:

Wilky Property Holdings Ltd
Parallel House
32 London Road
Guildford
GU1 2AB

Signed:


Chisholm Nurser & Partners Limited



A LandAmerica Company

Building and Project Consultants

EXECUTIVE SUMMARY

CLIENT NAME:	Wilky Property Holdings Ltd	
PROPERTY ADDRESS:	Westmead House Westmead Farnborough GU14 7LP	
CERTIFICATION DATE:	4 October 2008	

PROPERTY DESCRIPTION

The subject site comprises a six storey 1970s office building located in Farnborough, Hampshire. External construction is predominantly cavity brick and block walls with 4mm single and additional secondary glazing to all floors. The property has an asphalt covered concrete deck flat roof.

ENERGY PERFORMANCE RATING

The property achieves an energy performance rating of 75 which translates to a C rating on the A-G scale. By way of comparison the calculated stock average equals a rating of 63 and the Part L 2006 legal standard equates to a rating of 33.

RECOMMENDATIONS

The DesignBuilder EPC software identified the following recommendations as can be seen in the recommendations report provided in Appendix B:

- Consider replacing T8 lamps with retrofit T5 conversion kit
- Consider solar control measures such as the application of reflective coating or shading devices to windows
- Introduce high frequency ballasts for fluorescent tubes
- Add optimum start/stop to the heating system
- Install more efficient water heater
- Consider replacing DHW system with point of use system
- Carry out a pressure test, identify and treat air leakage. Enter results into EPC calculation
- Consider installing building mounted wind turbine(s)

Auditor: Andrew Land

First draft issued

06/10/2008

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APPENDIX B	EPC RECOMMENDATION REPORT
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1.0 INTRODUCTION AND METHODOLOGY

- 1.1 CNP has been instructed by Wilky Property Holdings Ltd to produce an Energy Performance Certificate for Westmead House, Farnborough. The purpose of the report is to present the energy performance rating and potential recommendations for improvement. The Energy Performance Certificate is included in Appendix A.
- 1.2 The energy performance rating and environmental impact rating of the property has been assessed based on the following information:
- Building geometry
 - Building fabric construction
 - Building services details
- 1.3 The Energy Performance Certificate (EPC) has been produced in accordance with The Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007, part of The Building Act 1984. The EPC includes the 'asset rating' of the building which is a numerical indicator of the amount of energy estimated to meet the different needs associated with a standardised use of the building.
- 1.4 The building has been modelled using accredited DesignBuilder Simplified Building Energy Model (SBEM) software, based on information from the following sources:
- Site drawings provided by Wilky Property Holdings Ltd
 - Site Energy Audit undertaken by Andrew Land of CNP on 25 September 2008
- 1.5 In accordance with Regulation 11 of Energy Performance of Buildings Regulations, the EPC is accompanied by a recommendation report which provides recommendations for the improvement of the energy performance of the building.
- 1.6 In accordance with Regulation 25 of Energy Performance of Buildings Regulations, the EPC has been produced by an energy assessor who is a member of an accreditation scheme approved by the Secretary of State:

Name: Andrew Land

Accreditation Scheme: BRE Global Ltd

Accreditation Number: BREC400003

2.0 THE PROPERTY

Property details and location

2.1 The subject site comprises a six storey 1970s office building located in Farnborough, Hampshire. External construction is predominantly cavity brick and block walls with 4mm single and additional secondary glazing to all floors. The property has an asphalt covered concrete deck flat roof.

2.2 The building is conditioned using a wet central heating system fed by two gas-fired atmospheric boilers located in the rooftop plant room. Split air conditioning units are provided in comms rooms on the ground and second floor. Domestic hot water is provided by electric instantaneous hot water heaters located on each floor. Lighting is mainly compact fluorescent lamps in office areas with some T8 fluorescent tubes in ancillary and circulation spaces. There are no renewable energy sources on site.

Geometry

2.3 A study of the geometry has been undertaken for the purposes of preparing of an EPC. This has been based upon:

The following site drawings were made available by Wilky Property Holdings Ltd:

- General floor plans, reference 0774, dated April 2004
- Amendments to the above drawings based on the site energy audit undertaken on 25 September 2008 by Andrew Land of CNP

Building fabric

2.4 A study of the building fabric has been undertaken for the purposes of preparing an EPC. This has been based upon:

- A building energy audit undertaken on 25 September 2008 by Andrew Land of CNP

Building services

2.5 A study of the building services has been undertaken for the purposes of production of an EPC. This has been based upon:

- A building energy audit undertaken on 25 September 2008 by Andrew Land of CNP

3.0 BUILDING ENERGY PERFORMANCE RATING

- 3.1 Westmead House achieves an Energy Performance Rating of 'C' achieving a score of 75.
- 3.2 The Part L 2006 Building Regulations equivalent achieves a score of 33 which translates to a 'B'. The stock average (notional building built to 1995 Standards) achieves a score of 63 which translates to a 'C'. The figures provided represent the carbon dioxide emissions in kilograms of CO₂ per square metre. The full EPC is presented in Appendix A.
- 3.3 Analysis of the breakdown of the energy consumption illustrates that 51% of the energy consumed is used for the provision of space heating. A full breakdown of the energy consumption is presented in Appendix C.

4.0 RECOMMENDATIONS

4.1 The following measures have been recommended by DesignBuilder SBEM software as potential measures which can be implemented in order to improve the energy performance of Westmead House.

4.2 In terms of payback, short refers to a payback of less than 3 years; medium refers to a payback of 3 – 7 years; and long refers to a payback of more than 7 years.

4.3 In terms of potential impact, the levels defined below apply:

- High - > 4% change in carbon emissions
- Medium - ≤ 4% and > 0.5% change in carbon emissions
- Low - ≤ 0.5% change in carbon emissions

Item	Measure	Potential Impact	Payback
1.	Consider replacing T8 lamps with retrofit T5 conversion kit	High	Short
2.	Consider solar control measures such as the application of reflective coating or shading devices to windows	Medium	Short
3.	Introduce high frequency ballasts for fluorescent tubes	Low	Short
4.	Add optimum start/stop to the heating system	High	Medium
5.	Install more efficient water heater	Medium	Medium
6.	Consider replacing DHW system with point of use system	Low	
7.	Carry out a pressure test, identify and treat air leakage. Enter results into EPC calculation	Medium	Long
8.	Consider installing building mounted wind turbine(s)	Low	Long

4.4 We would be pleased to receive additional instructions to undertake a detailed review of selected measures and establish a budget cost with a consequent new energy rating should you wish to improve the energy rating of the property. There is however no legal requirement for you to do so.

5.0 CONCLUSIONS

Building performance

- 5.1 Based on information received by CNP, Westmead House has been assessed to be a typical performing building in terms of energy consumption and environmental impact.
- 5.2 The property achieved an energy performance rating of 75 which equates to a 'C' rating on the energy efficiency scale.

APPENDIX A

ENERGY PERFORMANCE CERTIFICATE

APPENDIX B

EPC RECOMMENDATION REPORT

APPENDIX C

ENERGY CONSUMPTION BREAKDOWN

Energy Performance Certificate

Non-Domestic Building



Westmead House
Westmead
GU14 7LP

Certificate Reference Number:
0470-0538-2780-7900-0096

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+

A 0-25

B 26-50

C 51-75

D 76-100

E 101-125

F 126-150

G Over 150

Net zero CO₂ emissions

75

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):	5292
Building complexity (NOS level):	4

Benchmarks

Buildings similar to this one could have ratings as follows:

33 If newly built

63 If typical of the existing stock

Administrative information

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

Assessment Software: DesignBuilder v.1.6.6.002 using calculation engine SBEM v3.1.a

Property Reference: 778705920000

Assessor Name: Andrew Land

Assessor Number: BREC400003

Accreditation Scheme: BRE Global Ltd

Employer/Trading Name: CNP Ltd

Employer/Trading Address: Warwick House Claremont Lane Esher Surrey KT10 9DP

Issue Date: 04 Oct 2008

Valid Until: 03 Oct 2018 (unless superseded by a later certificate)

Related Party Disclosure:

Recommendations for improving the property are contained in Report Reference Number: 9000-7070-0488-2490-5070

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.



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



Report Reference Number: 9000-7070-0488-2490-5070

Westmead House
Westmead
GU14 7LP

Building Type(s): Office

ADMINISTRATIVE INFORMATION	
Issue Date:	04 Oct 2008
Valid Until:	03 Oct 2018 (*)
Total Useful Floor Area (m ²):	5292
Calculation Tool Used:	DesignBuilder v.1.6.6.002 using calculation engine SBEM v3.1.a
Property Reference:	778705920000

ENERGY ASSESSOR DETAILS	
Assessor Name:	Andrew Land
Employer/Trading Name:	CNP Ltd
Employer/Trading Address:	Warwick House Claremont Lane Esher Surrey KT10 9DP
Assessor Number:	BREC400003
Accreditation scheme:	BRE Global Ltd
Related Party Disclosure:	

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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):	5292
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 DesignBuilder v.1.6.6.002 using calculation engine SBEM v3.1.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
Consider replacing T8 lamps with retrofit T5 conversion kit.	LOW
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
Add optimum start/stop to the heating system.	HIGH
Install more efficient water heater.	MEDIUM
The default heat generator efficiency is chosen. It is recommended that the heat generator system be investigated to gain an understanding of its efficiency and possible improvements.	HIGH

c) Recommendations with a long payback

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

Recommendation	Potential Impact
Some walls have uninsulated cavities - introduce cavity wall insulation.	MEDIUM
Add weather compensation controls to heating system.	HIGH

Consider replacing DHW system with point of use system.	LOW
Carry out a pressure test, identify and treat identified air leakage. Enter result in EPC calculation.	MEDIUM
Consider installing building mounted wind turbine(s).	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.

SBEM Main Calculation Output Document

Sat Oct 04 17:51:04 2008

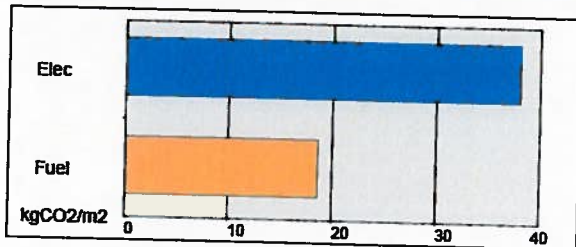
Building name

Westmead House

Building type: Office

SBEM is an energy calculation tool for the purpose of assessing and demonstrating compliance with Building Regulations (Part L for England and Wales, Section 6 for Scotland and Part F for Northern Ireland) and to produce Energy Performance Certificates. Although the data produced by the tool may be of use in the design process, **SBEM is not intended as a building design tool.**

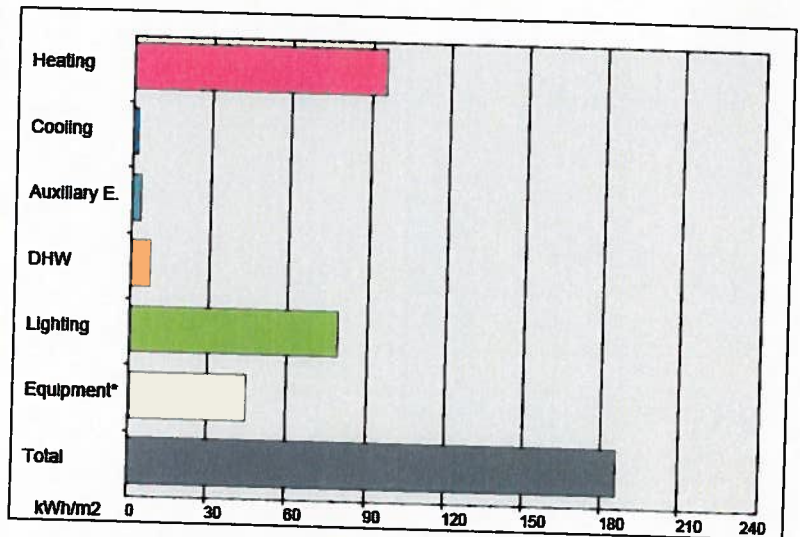
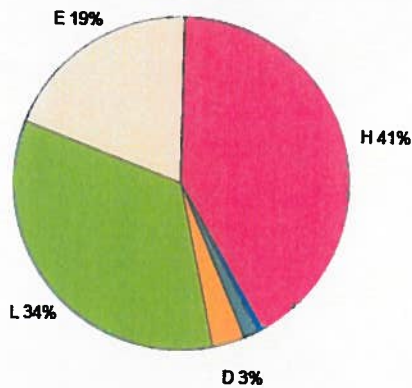
Building Energy Performance and CO2 emissions



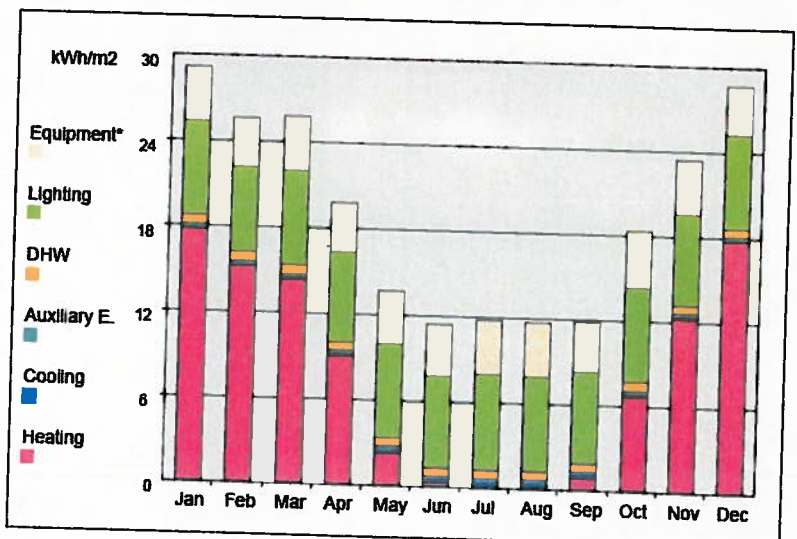
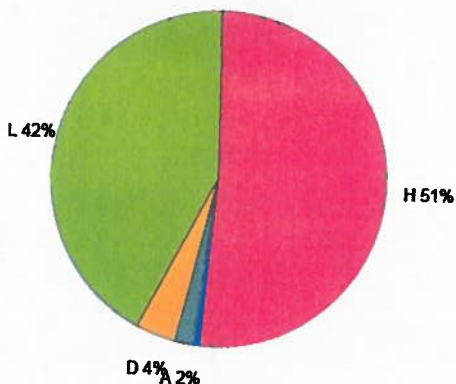
0 kgCO2/m2 displaced by the use of renewable sources.

Building area is 5292.36m2

Annual Energy Consumption



(Pie chart excluding Equipment end-use)



(*) Although energy consumption by equipment is shown in the graphs, the CO2 emissions associated with this end-use have not been taken into account when producing the rating.