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ENERGY PERFORMANCE CERTIFICATE

**CEDAR HOUSE
78 PORTSMOUTH ROAD
COBHAM**



Date: May 2008

Ref: 08.1277/ AL / GM

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For and on behalf of:

Mundays Solicitors LLP
Cedar House
78 Portsmouth Road
Cobham
KT11 1AN


Signed:

Chisholm Nurser & Partners Limited



Building and Project Consultants

EXECUTIVE SUMMARY

| | | |
|--|---|--|
| CLIENT NAME: | Mundays Solicitors LLP |  |
| PROPERTY ADDRESS: | Cedar House 78 Portsmouth Road Cobham KT11 1AN | |
| CERTIFICATION DATE: | 22 May 2008 | |
| PROPERTY DESCRIPTION | | |
| <p>The property is a detached building providing approximately 38,000 ft² of office accommodation for Mundays Solicitors arranged on the ground, first and second floors. Ancillary accommodation including the plant and storage rooms are located at fourth floor level within a set-back mansard construction.</p> | | |
| ENERGY PERFORMANCE RATING | | |
| <p>The property achieves an energy performance rating of 96 which translates to a D rating on the A-G scale. By way of comparison the calculated stock average equals a rating of 128 (F) and the Part L 2006 legal standard equates to a rating of 55.4 (C).</p> | | |
| RECOMMENDATIONS | | |
| <p>The iSBEM EPC software identified a range of recommendations as can be seen in the recommendations report summarised in Section 4.0 and presented in Appendix B. Most of the recommendations relate to improvements in the M&E plant and controls.</p> | | |
| Auditor: Andy Land | First issued | 30 May 2008 |

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1.0 INTRODUCTION AND METHODOLOGY

- 1.1 CNP has been instructed by Munday Solicitors LLP to produce an Energy Performance Certificate for Cedar House, 78 Portsmouth Road, Cobham. 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 the Building Research Establishment's (BRE) accredited Simplified Building Energy Model (iSBEM) software, based on information from the following sources:
- Site drawings provided by Nigel Waller of Munday Solicitors LLP
 - Operations & Maintenance Manuals retained on site in the O&M manuals.
 - Site Energy Audit undertaken by Andy Land of CNP on 15 April 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:

Assessor Name: Andy Land

Accreditation Scheme: BRE Global

Assessor Number: BRE400003

2.0 THE PROPERTY

Property details and location

- 2.1 The subject site comprises a three storey office building located on the Portsmouth Road in Cobham, Surrey. The property is of 1997 construction. The property is a detached building providing approximately 38,000 ft² of office accommodation for Munday's Solicitors arranged on the ground, first and second floors. Ancillary accommodation including the plant and storage rooms are located at fourth floor level within a set-back mansard construction. The external elevations comprise fair faced cavity brickwork with aluminium double glazed windows generally throughout all elevations except for the occasional use of curtain walling within the stair lobbies located on each flank elevation and midway along the rear elevation. A particular feature on the front elevation is at first and second floor where the façade projects to form a canopy over the entrance and is glazed with curtain walling.
- 2.2 Internally the main entrance and circulation area is located on the front elevation towards the centre of the building with the main entrance lobby at ground floor level moving to the rear where there is a main staircase and two passenger lifts.
- 2.3 The internal fit out is similar throughout the office accommodation and is part cellular and part open plan with generally non-loadbearing stud partition walls.
- 2.4 The mechanical and electrical services include central air conditioning and ventilation plant consisting of a four pipe fan coil air conditioning system.

Geometry

- 2.5 A study of the geometry has been undertaken for the purposes of preparing of an EPC. This has been based upon drawings made available on 2 April 2008 by Nigel Waller of Munday's Solicitors LLP. These included:
- Complete layout plans for the whole building.
 - A comprehensive set of architectural drawings by Amos Partnership.

Building fabric

- 2.6 A study of the building fabric has been undertaken for the purposes of preparing an EPC. This has been based upon:
- A detailed visual inspection
 - A selection of drawings were available in the O&M files.

Building services

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

- A detailed visual inspection
- Conversations with the resident services engineer
- A selection of services drawings available in the O&M files

3.0 BUILDING ENERGY PERFORMANCE RATING

- 3.1 Cedar House achieves an Energy Performance Rating of 'D' achieving a score of 96.
- 3.2 The Part L 2006 Building Regulations equivalent achieves a score of 55.4 (C). The stock average (notional building built to 1995 Standards) achieves a score of 128 which translates to a 'F'. 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 the energy consumption apportioned to heating, cooling, lighting and equipment is typical for a building of this type. A full breakdown of the energy consumption is presented in Appendix C.

4.0 RECOMMENDATIONS

4.1 The following measures have been recommended by BRE's iSBEM software as potential measures which can be implemented in order to improve the energy performance of Cedar 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.

| Item | Measure | Potential Impact | Payback |
|------|---|------------------|---------|
| 1. | It is recommended that the chiller system be investigated to gain an understanding of its efficiency and possible improvements. | High | Short |
| 2. | Consider replacing T8 lamps with retro fit T5 conversion kit. | Low | Short |
| 3. | Some spaces have a significant risk of over-heating, consider solar control measures such as the application of a reflective coating or shading devices to windows. | Medium | Short |
| 4. | Introduce HF (high frequency) ballasts for fluorescent tubes; reduce number of fittings required. | Low | Short |
| 5. | Consider replacing heating boiler plant with a high efficiency type. | High | Medium |
| 6. | Add optimum start/stop to the heating system. | High | Medium |
| 7. | 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 | Medium |
| 8. | Ductwork leakage is high. Inspect and seal ductwork. | High | Medium |
| 9. | Improve insulation on DHW storage. | Low | Long |
| 10. | Some windows have high UV values. Consider installing secondary glazing. | High | Long |
| 11. | Install more efficient water heater. | Low | Long |
| 12. | Add weather compensation controls to heating system. | High | Long |
| 13. | Add local time control to heating system. | High | Long |

4.3 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

- 5.1 Based on information received by CNP on 8 April 2008, Cedar 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 96 which equates to a 'D' rating on the energy efficiency scale.

APPENDIX A

ENERGY PERFORMANCE CERTIFICATE

