



EFFICIENTAIR AIR CONDITIONING INSPECTION AT THE MINISTRY SHOWS THE WAY TO IMPROVE DEC RATINGS

Efficient Air helps the CLG to improve the energy performance of its Eland House HQ by 12.6 per cent, which equates to energy saving of 662,055 kWh valued at £40,909. The Carbon Dioxide reduction is calculated at 250 tonnes.

When you are the department responsible for implementing the European Performance of Building Directive (EPBD), understanding and minimising the environmental impact of your own buildings is of prime importance.

The Department of Communities and Local Government (CLG) were keen to ensure they were amongst the first to get EPCs and DEC ratings and recently commissioned one of the first air conditioning inspections on their headquarters building

EFFICIENT AIR
NUMBER TEN
THE CENTRE
HIGH STREET
POLEGATE
EAST SUSSEX BN26 6AQ
TEL: +44 (0) 1825 748150
FAX: +44 (0) 1825 748151
ENQUIRIES@EFFICIENTAIR.CO.UK
WWW.EFFICIENTAIR.CO.UK



Certificate number 3785/03

INVESTOR IN PEOPLE

**ELAND HOUSE
BRESSENDEN PLACE
LONDON**



The inspection, carried out in 2008 by leading HVAC energy saving specialists Efficient Air, was required under the EPBD before January 4 2009, as the building's air conditioning equipment had a rated output greater than 250kW of cooling output. It was the third step in assessing the energy performance of the 11 story glass and steel framed office block. Eland House had already received an "F" rating on its DEC for operational efficiency, compared with a "C" rating on its EPC for its construction type.

Efficient Air worked with consulting engineers Faber Maunsell, and the resident facilities management team, MITIE Engineering during the inspection. The aim of the inspection was to identify no-cost/low-cost initiatives and capital investment opportunities, to compare the size and appropriateness of refrigeration plant in relation to cooling demands of the building, and to ascertain the effectiveness of current maintenance regimes.

Efficient Air's air conditioning inspection report included a Ten Point action plan. The energy saving opportunities detailed in this plan alone would improve the current operational efficiency of the building as shown on the DEC from an "F" to an "E" rating.



According to Efficient Air's calculations, implementing the proposals will improve the energy performance of Eland House by 12.6 per cent, which equates to energy saving of 662,055 kWh valued at £40,909. The Carbon Dioxide reduction is calculated at 250 tonnes.

The CLG energy managers now have reliable data to optimise the building's HVAC operations, reduce energy costs and Carbon Dioxide emissions.

Carl von Reibnitz, the CLG's sustainability manager states: "The 'Article 9' air conditioning inspection undertaken at Eland House has proved to be a great success, with the initial cost being recouped very quickly. It not only backed up our own analysis, but provided us with further low/no cost quick wins and capital investment opportunities. We found Efficient Air's step by step action plan extremely useful, which after implementation could increase our operating efficiency DEC rating by at least 1 level."

EFFICIENT AIR
NUMBER TEN
THE CENTRE
HIGH STREET
POLEGATE
EAST SUSSEX BN26 6AQ
TEL: +44 (0) 1825 748150
FAX: +44 (0) 1825 748151
ENQUIRIES@EFFICIENTAIR.CO.UK
WWW.EFFICIENTAIR.CO.UK

.."IMPLEMENTING THE PROPOSALS
WILL IMPROVE THE ENERGY
PERFORMANCE OF ELAND HOUSE
BY 12.6 PER CENT..."



NOTES FOR EDITORS:

THE 10 POINT ACTION PLAN

- 1 STANDARDISE ON TEMPERATURE SET-POINTS TO ELIMINATE FIGHTING BETWEEN UNITS AND CHILLED BEAMS.
- 2 ENSURE A DEAD BAND OF AT LEAST 3°C (+/-1.5°C) IS FACTORED INTO BMS STRATEGIES TO PREVENT SIMULTANEOUS HEATING AND COOLING BETWEEN THE AIR HANDLING UNITS, PERIMETER HEATING CIRCUITS AND THE CHILLED BEAM UNITS.
- 3 MORE FREQUENT TEMPERATURE AND PRESSURE SENSOR CALIBRATION, FOR OPTIMUM CONTROL EFFICIENCY.

- 4 REPLACE FAULTY COOLING AND HEATING VALVES, LETTING BY WHEN CLOSED.
- 5 REDUCE THE OVER SUPPLY OF AIRFLOW ON AIR HANDLING UNIT 4.
- 6 SET CONTROL DAMPER ACTUATORS TO FOR FREE COOLING AND HEAT RECLAIM OPTIMISATION FROM RE-CIRCULATED AIR.
- 7 INCREASING THE FREQUENCY OF FILTER CHANGES.
- 8 REPLACE OLD TECHNOLOGY FANS WITH NEW HIGH EFFICIENCY TECHNOLOGIES.
- 9 CHANGE THE CONTROL OF THE 'ON FLOOR CHILLED' WATER PUMP TO REDUCE THE USE OF THE CHILLED BEAMS DURING WINTER.
- 10 REPAIR AND IMPROVE LAGGING ON DUCTWORK AND PIPEWORK TO MINIMISE LOSSES.

**THE TEN POINT PLAN
BY EFFICIENT AIR**



LOOKING FOR A MORE DETAILED CASE STUDY?

SHOULD YOU WANT TO USE THIS INFORMATION IN THE FORM OF A MORE DETAILED CASE STUDY, WE WOULD BE PLEASED TO PROVIDE YOU WITH THE NECESSARY INFORMATION.

CONTACT US AT:



EFFICIENT AIR
NUMBER TEN THE CENTRE
HIGH STREET POLEGATE
EAST SUSSEX BN26 6AQ
TEL: +44 (0) 1825 748150
FAX: +44 (0) 1825 748151
ENQUIRIES@EFFICIENTAIR.CO.UK
WWW.EFFICIENTAIR.CO.UK