



EFFICIENTAIR - EFFICIENCY IMPROVEMENT AT THE BRITISH LIBRARY

The gravity of climate change and its effects on organisations and individuals is now indisputable, supported by recent authoritative publications like the Stern Report and an endless stream of warnings from eminent scientists and commentators. But a programme first put in place over three years ago at the British Library by leading HVAC engineering consultancy Efficient Air is showing that practical solutions for energy and carbon emission saving are available now and working.

The Library, opened in 1997 at its St Pancras site, is the UK's national library and the world's leading resource for scholarship, research and innovation. Predictably for such a complex operation, the building services require careful management and maintenance, and an energy management programme that optimises the operating performance and life-span of motor drives and Variable Air Volume (VAV) systems is a vital consideration.

The initial project proposals made by Efficient Air were developed from monitoring the maximum, minimum and average motor fan power and airflow/pressure conditions for the existing fan system over the period of 1 week. The first stage in providing a major reduction in whole life costs has been achieved by the installation of new high efficiency aerofoil bladed supply and extract fans.

The British Library also gained from a lower project cost due to the efficiency improvement from the aerofoil fans which resulted in the selection of smaller sized high performance motors and inverters to replace the existing Eddy Current Coupling drive arrangement. Energy savings in excess of 35 per cent were achieved, together with carbon savings of 152 tonnes per year.

"We initially asked Efficient Air to audit our existing systems as part of an ongoing monitoring exercise, and to ensure that we remain fully up to date with improving technology and systems", explained Gerry Goldner, at that time in charge of energy management at The British Library.

Efficient Air has just completed its latest project at the St Pancras site with the installation of AHU 214 supply fan. For this project alone, energy savings in the area of 35 per cent are again predicted, with a saving of 19.2 kW/hr, the equivalent of 74 tonnes of CO₂.

Efficient Air's Managing Director, Darren Bryant, commented: "What was then pioneering work