



## EFFICIENTAIR - ENERGY SAVINGS AT WORMWOOD SCRUBS

Efficient Air has helped HMP Wormwood Scrubs to achieve nearly 70 per cent energy savings on the running of its laundry following a major audit of the existing air handling units and the installation of higher performance main supply and extract fans. The work was carried out following the introduction of a new sustainable development policy within the Prison Service, which supersedes the Service's previous greening policy.

The original arrangement of air handling in the laundry had old generation backward curved fans consuming a total motor input power of 23.2 kW/hr with an annual running cost of over £8,100. The replacement system, installed by Itchen Electrical Services, comprises 4 new high efficiency RZR 15,400 aerofoil bladed backward curved centrifugal fans, driven by ABB Efficiency Class One motors and controlled via matched ABB ACH 550 frequency inverters, which adjust the required ventilation supply.

Measurements on completion recorded a significant 69 per cent reduction in power when matching the maximum flow rate. This represents a saving of over £5,500 with a payback period of just under 3 years. Annual CO2 savings amounted to 61.4 tonnes. The installation also resulted in the restoration of the heat recovery system that had previously been out of action due to motor overload, resulting in a more comfortable working environment.

The positive impact of this relatively straightforward measure has pleased the Works Manager at HMP Wormwood Scrubs, Jim Sarsfield, who now has a modern, efficient and reliable air handling system. It also meets the Prison Service's own criteria for sustainable development, where it is regarded as one of the leaders in this area of work by Whitehall.