

Energy-Free Lighting & Ventilation

September 2001

"Riverside Community College taps into the Sun and Wind to provide a healthier working environment for staff and pupils"

Project Objectives

The main objective of this project was to implement an integrated package of energy efficiency measures, which would lead to significant energy saving and improved comfort conditions whilst promoting the importance of energy conservation and renewable energy within the school.

Introduction

Riverside Community College has harnessed the latest technology (Mondraught SunPipes and WindCatchers) which provided natural sunlight and ventilation into the school Library and Workshop.

SunPipes operate by capturing natural sunlight at the roof of a building, which is intensified as it is reflected through an air tight silverised mirror finish aluminium tube down into the areas below.

WindCatchers provide controlled energy-free ventilation by supplying natural fresh air into the centre of a building. They operate by encapsulating the prevailing wind, from any direction, at roof level and delivering it to rooms below, at the same time as expelling the stale air through other segments of the passive stack arrangement.

Description

Both the lighting and ventilation systems incorporate intelligent automatic controls. The lighting system has been linked to a photocell, which will automatically switches the lighting *on* or *off* according to daylight levels. Similarly, the WindCatchers have been linked to sensors / controller to prevent excessive heat lost in the winter, whilst still providing a regular flow of clean, fresh air.

'Good for the college and great for the environment'

Environmental Impact

The school will be cutting CO² emissions by approximately ? kg a year.

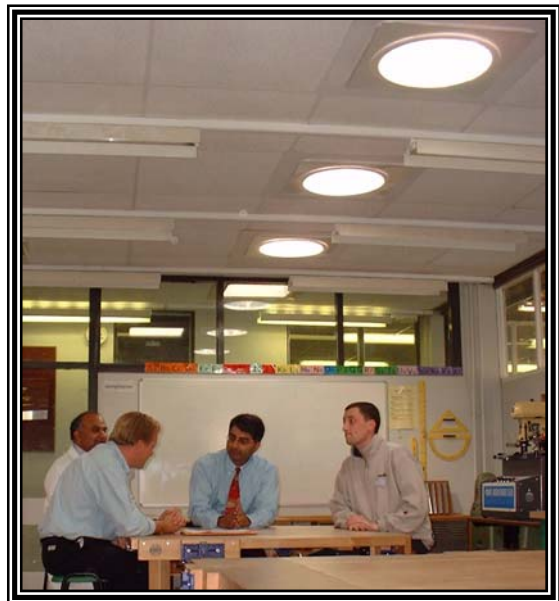
Benefits

These system will reduce energy consumption in kWh per year, in addition to this is the environmental and financial benefits, but most importantly the system will require minimal maintenance and increase the life of existing fittings whilst providing comfort.

Investment

The total cost of implementing these energy efficiency measures was £40,000, which included intelligent lighting / ventilation controls.

Carolyn Robson, Principal, said: *"We are absolutely delighted with both the SunPipes and WindCatchers, this was the perfect system to help us reduce our energy consumption, but just as importantly, to improve the working conditions in these area. The SunPipes particularly, have created a great deal of interest with our pupils who are fascinated by them."*



CASE STUDY

The Wind & Sun working for

CASE STUDY

