



**Oxford County Council** County Hall

SVCS01

### Oxford County Council: Building Refurbishment reduces carbon emissions and energy for council.

When Oxford County Council began refurbishing its headquarters building in early 2009, new and innovative Carbon Reduction technology SolaVeil® was chosen as the right environmental solution to help the council achieve optimum levels of natural daylight and address some of the temperature issues experienced within the building and reduce energy costs and carbon emissions in the long-term.

Prior to this refurbishment, increasingly frequent requests from staff to address summertime overheating issues, (with some suggestions that cooling be re-introduced across the building) were received. An extension to the existing HVAC system was likely to cost £750K and significantly increase operational building running costs.

Following a SolaVeil® test installation, the building was subjected to a complete SolaVeil® Building Energy Reduction solution.



<b>Industry Sector</b>	Public Sector Commercial	
<b>Business Driver</b>	Reduced Energy Reduced CO <sub>2</sub> ROI < 3 Years	
<b>Product</b>	SolaVeil Cool Energy SolaVeil Duo Blind	
<b>Benefits</b>	Lower internal temperatures Enhanced natural daylight Greater staff comfort Reduced glare Reduced energy Reduced CO <sub>2</sub>	
<b>SolaVeil Post Installation Data</b>		
	Pre SolaVeil	Post SolaVeil
Light levels	300 Lux	500 Lux
Use of artificial lighting	Always	Controlled
Window Blinds	Closed	Open
External View	Poor	Very good
<b>Savings</b>		
Energy	30% Reduction	
Capital Expenditure Saving	£750K	
Carbon Reduction	200 Metric Tonnes PA	

Before



After



Performance

Cooling

SolaVeil's ability to reject solar heat gain has meant that there has been no requirement to install an air conditioning system to the building, despite the building now housing over 500 occupants. Both the estimated capital expenditure of £750k for an extended cooling system and its on-going running costs have been eliminated.

Lighting

Despite the building now having twice as many light fittings installed, with the installed capacity increasing from 25kW to 45kW, energy consumption relating to lighting in the building has now fallen to 60% of projected usage.

Comments

*"Our primary driver was to get more natural daylight. We looked at a few different options to gain better levels of natural light, but in the end we were impressed with SolaVeil. The technology had the ability to provide 'glare free' daylight to the working environment which made window blinds redundant, and it also controlled sunlight glare."*

*"Our secondary issues were that during the summer months, Oxford County Council experiences uncomfortable temperatures in the office building and although we had undertaken a number of different steps to improve this, the refurbishment offered the chance to further improve the temperature issues in the council buildings and we thought SolaVeil could help assist with the temperature levels in the offices. We therefore decided to do an initial trial installation in one area and following that we installed SolaVeil on two floors of the building, and subsequently the entire building."*

*"We were impressed with how in low light conditions SolaVeil reflects light back into the office environment and reduces lighting energy consumption and light pollution to the surrounding environment."*

**Darrell Marchand**

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