

COOL-PHASE & WINDCATCHER: Alderman Knight School

Natural Cooling and Natural Ventilation

Added on 01/07/2015



One new COOL-PHASE® unit has been installed in the ICT Room at Alderman Knight School to provide natural cooling within the area. The data below shows the performance achieved from the system as an average.

Internal Temperature Results:

Daily Temperatures (°C)			
	Average	Min Average	Max Average
07/06/12 - 31/05/13	21.8 °C	19.6 °C	23.2 °C
31/05/13 - 24/03/14	20.7 °C	18.4 °C	22.1 °C
24/03/14 - 30/03/15	20.8 °C	18.6 °C	22.1 °C

This data was collected from the unit installed between 7th June 2012 and 30th March 2015. The table shows the overall average daily temperatures for each year.

Max Temperatures (%)			
	>25°C	>28°C	>32°C
07/06/12 - 31/05/13	7.3%	0.5%	0%
31/05/13 - 24/03/14	0.4%	0%	0%
24/03/14 - 30/03/15	0%	0%	0%

The table above shows the percentage of time that the internal temperature has spent at over 25 °C, 28 °C and 32 °C during the logged period.

Energy Consumption:

Energy Use over the total installed period: 147 weeks (2 Years 10 months)					
Total Energy Usage since install (based on £0.11 per KWh)	440.9 KWh	£48.50 total	33p per week	5p per day	Approx. £17 year

CO₂ Levels:

CO ₂ Levels			
	>1000 ppm	>1200 ppm	>1500 ppm
07/06/12 - 31/05/13	3%	0.5%	0%
31/05/13 - 24/03/14	5.1%	0.7%	0%
24/03/14 - 30/03/15	4.5%	0.6%	0%

Background or atmospheric CO₂ level is approximately 400 parts per million (ppm) and 1500 ppm or above would be considered a high level.

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Matt Peplow - Business & Operation Manager at Alderman Knight School said:

“Throughout our school there were very few rooms that suffered with no ventilation. All of our classrooms either have openable north lights or external doors. However we did have an ICT Suite, an Office and a Meeting Room with no external windows so we decided to utilise the Monodraught WINDCATCHER® and COOL-PHASE systems within these spaces. The COOL-PHASE system that we have in the ICT Suite manages the temperature of the room very well and whilst you may lose an element of control that you get with Air-Conditioning, you are reducing the energy consumption that you are using to cool the space. We also had some WINDCATCHER systems installed in the Main Hall which is very useful when the Hall is packed up over a period of time. It makes a big difference in terms of the levels of CO₂ and quality of the air”

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