



Project:

**Meadow Wood School,
Bushey, Hertfordshire**

Application:

Xtralite XSPAN Ridge Construction with one change in direction and vertically glazed gable ends

Sizes:

Overall length 8.98 m and 4.68 m wide with 16 mm Lexan[®] Thermoclear[®] filled with Nanogel[®]

Technical details:

U - value: 1.31 (W/m².K)

G - value: 64 %

Light transmission: 57 %

Owner:

Hertfordshire County Council

Specifier

Mouchel Parkman

Contractor:

installed by Xtralite (Rooflights) Limited

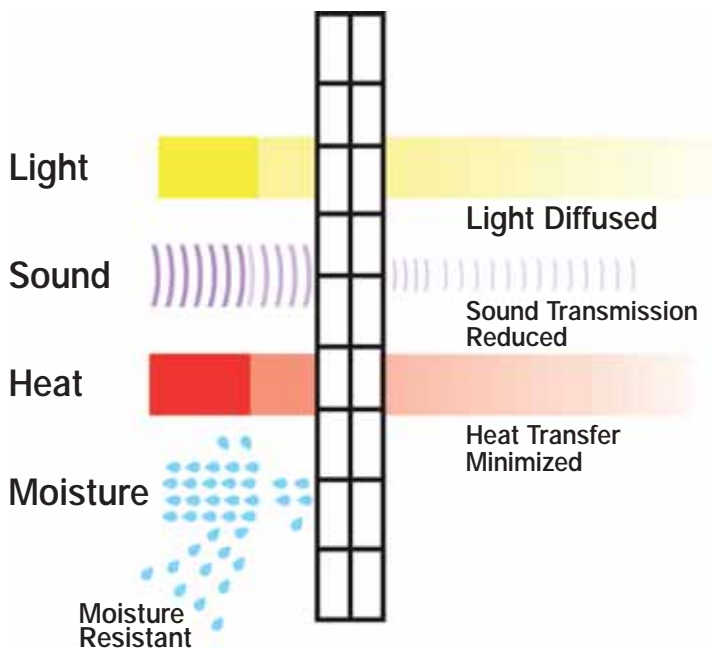
Reasons for selection:

The classroom area had a particular problem with solar overheating in the summer and heat loss during cooler periods. In addition, glare made for an uncomfortable teaching space. Xtralite's proposed use of Nanogel presented an excellent overall solution.

Testimonial / Quote:

According to John Ladner of Mouchel Parkman:
"The Xtralite System incorporating Nanogel is performing above our expectations. The temperature reduction during the recent spell of hot weather was significant. Coupled with the soft even light, and the removal of glare, we are delighted that the school now has an extremely comfortable teaching space which can be used throughout the entire year."

The Only Eco-Insulation for High-Performance Daylighting



Characteristics of Nanogel®

Particle size range	0.5 to 3.4 mm
Bulk Density	60-80 kg/m ³
Surface Chemistry	Fully hydrophobic
Light transmission	up to 40 % in 25 mm panel
Thermal conductivity	0.018 (W/m.K)
Insulation value U value	0.89 in 25 mm panel
Sound speed	100 m/sec vs 340 m/sec in air
UV stable	no discoloration
Growth of mildew/fungus	no
Combustible	no
Smoke generation	no

Benefits of Nanogel

- Light transmission and insulation combined
- Better diffusion of light
- No colorchange in accelerated weathering tests
- Thermal Insulation:
 - Doubles insulation
 - No downdrafts
 - Better comfort at lower cost/HVAC
- Displaced dewpoint: No condensation
- Acoustical Insulation: 50 % reduction @ 100 Hz
- Very low weight: 60-80 gram/litre

Features & Benefits to Architects / buildingowners:

Light

Diffusion	Larger panels	----> Architectural freedom
	No shadows	----> No investment
	No sunshades	----> No maintenance

Insulation

Thermal	No heat loss	----> Cost reduction
	No downdraft	----> Better comfort
Acoustic	Sound dampening	----> Better comfort
	Reduction hail/rain	----> Increased productivity

Sound

Esthetics	Greater architectural freedom
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Warranty:

10 years on Loss of light transmission, loss of thermal conductivity and UV resistance.

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