

## Sustainable Educational Facilities.

SBE can help you clarify, numerate and achieve your environmental design ambitions.

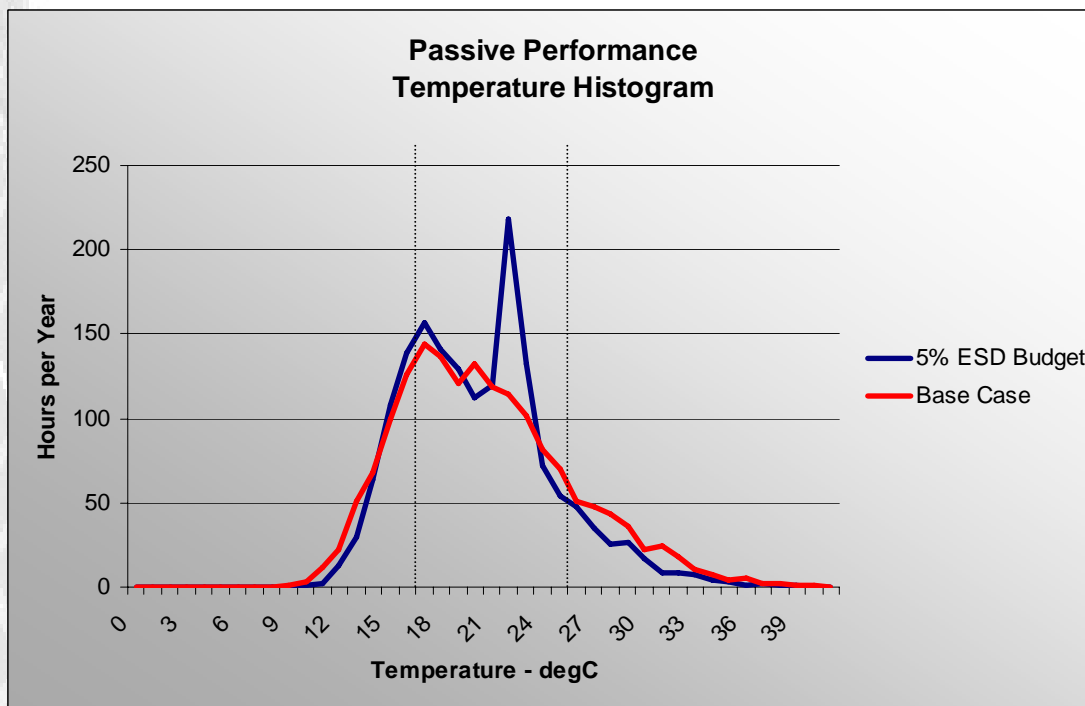
SBE is currently engaged on five large tertiary projects and numerous primary and secondary schools to provide Environmentally Sustainable Design (ESD) Consultancy Services. In addition, SBE were recently appointed by the Department of Education and Early Childhood development (DEECD) to produce ESD Guidelines, a thermal comfort policy and to provide sustainable design advice for the development of template designs for the **Building the Education Revolution**.

SBE was involved in the development of the Green Star Education pilot tool and is currently applying the tool to six projects.

SBE's combined staff of Architects and Engineers can provide expert advice on how to improve indoor environmental quality while reducing energy consumption. SBE can provide sophisticated modeling to test and prioritise design initiatives and to demonstrate paybacks.

SBE's staff are firm believers in the links between good Indoor Environment Quality (IEQ) and improved productivity and learning outcomes. Housing students in comfortable low energy facilities, be they new or renovated, is a sound investment in terms of running cost savings and a reduction in environmental impact, and an aid to achieving successful teaching and learning outcomes.

Good passive design will improve comfort with less **energy**.



Resultant indoor temperature study comparing base case to enhanced building fabric. Investments in improvements to the building fabric will reduce the impact of unfavourable ambient (external) conditions.



sustainable built environments

### SBE Melbourne

Level 9, 150 Queen St  
Melbourne, VIC, 3000  
T +61 3 9670 9820  
F +61 3 9670 9890

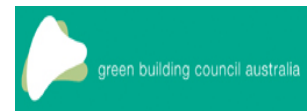
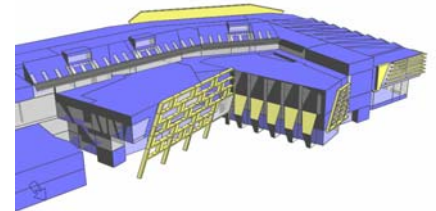
### SBE Sydney

Level 6, 61 Market St  
Sydney, NSW, 2000  
T +61 2 8289 5720  
F +61 2 9286 3745

E info@sbe.com.au

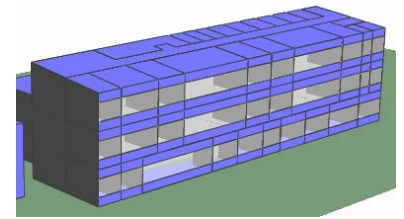
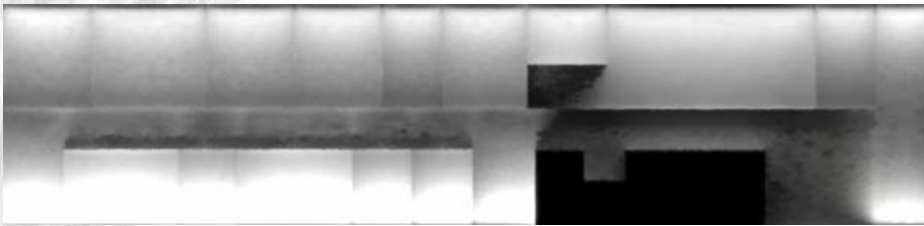
W www.sbe.com.au

Sustainable Built Environments Pty Ltd  
ACN 097862185 ABN 40097862185



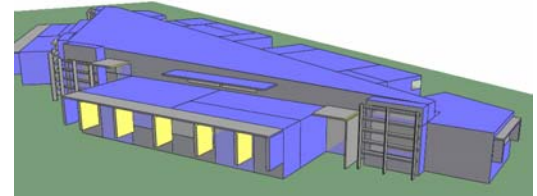
*SBE is an inaugural member of the Green Building Council of Australia and part of the Technical Working Committee that developed the Pilot Green Star Assessment tool for Educational Facilities.*

Children need good **daylighting** for healthy development.



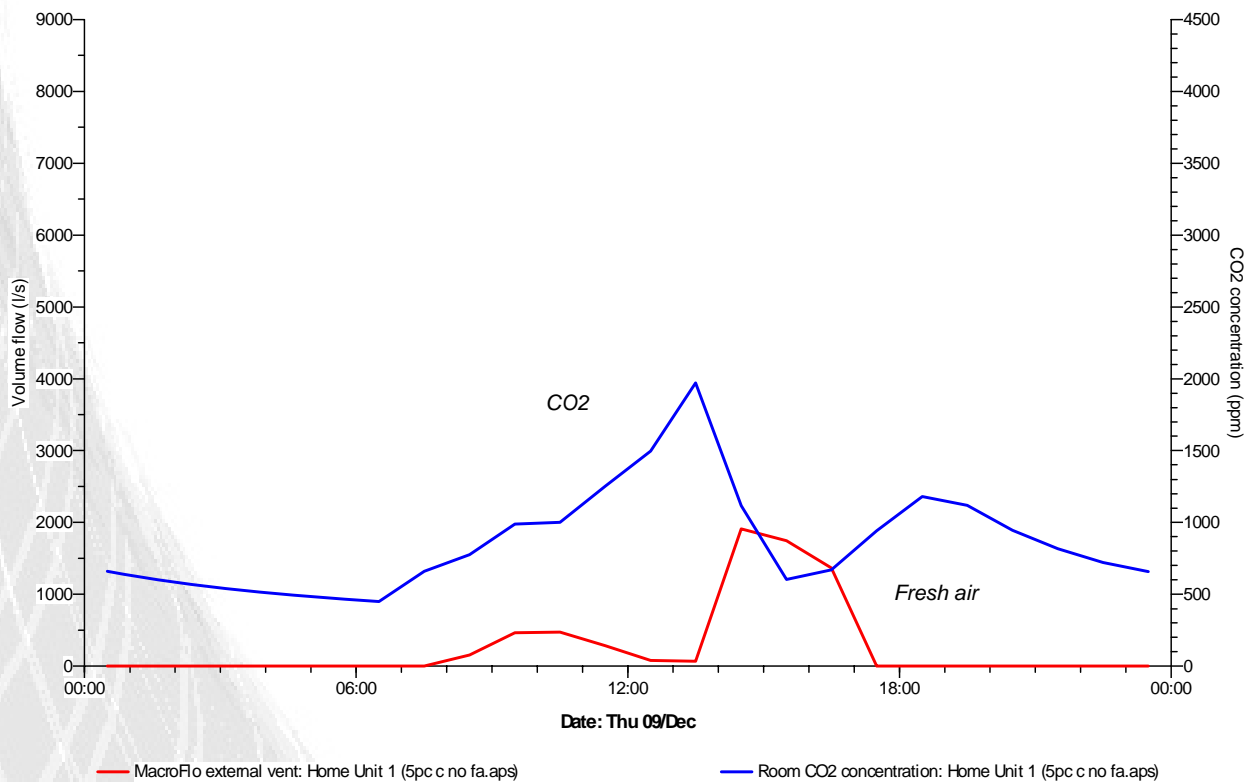
Daylighting study - White areas are good daylighting; black is poor/no daylighting. The large black area is the toilet block. The corridor is discernable running east west down the centre of the building. North is facing up the page.

Students need constant access to **fresh air** to maintain concentration. Otherwise elevated CO<sub>2</sub> levels will occur, resulting in stuffiness, drowsiness and ultimately impaired learning outcomes.



Building the Education Revolution

**Case 3** – Mild summer day, ambient temperatures fluctuating, windows opened for a short time in the morning, closed and reopened at 1pm and closed around 3pm. CO<sub>2</sub> levels are above 1,000ppm between 11am and 2pm. No back up ventilation provided.



- Blue line: Co<sub>2</sub> concentration – right axes
- Red line: fresh air through windows – left axes
- Windows open a little in the morning, CO<sub>2</sub> levels still rise; windows open wide after 1pm and reduce the CO<sub>2</sub> levels to below 1,000ppm.

Contact: Sean McArdle at SBE for further assistance. 03 9923 2345