

# High Tech Bronze BREATHING NEW LIFE

by NOWarchitecture

(Previous award: Green Piece Gold)

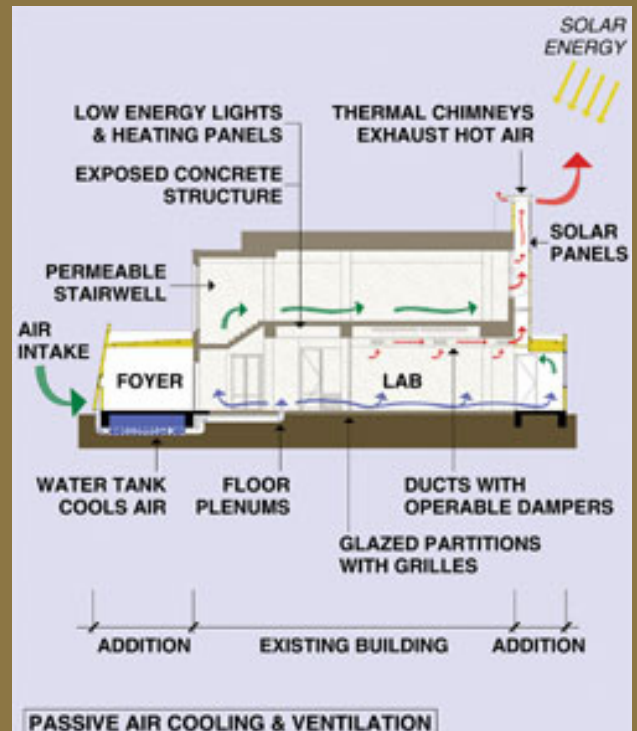
**Westbourne Grammar Senior Science (7-12), Melbourne, Australia:** This 1981 laboratory building has been updated into a technological, sustainable wonder. Fresh air is cooled by manifolds in an underground rainwater tank added to the facility's south side and induced through the building's louvered glazed partitions by thermal chimneys added to the facility's north side. The additions are lightweight construction to minimize embodied energy. The thermal chimneys are layered in front of the existing façade, forming a series of glazed shafts inserted between existing brick piers. Photovoltaic panels form part of the process of ESD education by contributing electricity to power equipment.

Recycling the embodied energy of an existing building for new needs proved a highly effective way of minimizing waste of precious global resources. To that end, the original concrete structure was stripped back to expose thermal mass for improved cooling and heating performance. Minimalist and strategic design has produced a sophisticated, controllable passive cooling and natural cross ventilation system.

The interior has been remodeled to improve natural daylighting and cross ventilation by using glazed partitions with grilles. The laboratories include serviced, stainless steel benches that pivot, allowing the laboratory layout to easily change to suit different groupings. Laboratories can be opened up to connect directly with seminar spaces, the student research library and state-of-the-art digital display technology.

Juror Carol Cash states that she liked the project "because it took an older building and updated it for the 21st century, using sustainable features."

# Bronze



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