



Smart design studio

Demonstrating what is possible in terms of environmentally sustainable design

In operation since 1997, Smart Design Studio (SDS) is a well-established architectural practice with a diverse range of work – including everything from private homes, to multi-level residential buildings and public projects – to its name.

An organisation with a long-held commitment to environmentally sustainable design, SDS recently moved to a new studio in Alexandria, a suburb in Sydney's inner west that combines a solid industrial history with a more recent period of regeneration.

Given that it involved a new home base for the practice, one that is expected to take it through to 2050 or so, this was a signature project for SDS. Beyond that, however, it was also something of a demonstration project. It

represented an opportunity to display what is possible in terms of sustainability.

SDS architect, Jo Ann Kok led the project to completion. Noting that notions of sustainability necessarily start with conservation, she explained that 80 per cent of the building's existing footprint, including the slab was retained.

"The original building included beautiful slender roof trusses and natural sunlight pouring in...we kept all of that and refreshed the space with white interior elements," she said. "The project was all about celebrating the existing industrial elements, of both the building and its immediate surroundings, and then inserting new components that were also industrial in nature but put together in a thoughtful way."

Smart Design Studio was conceived with some pretty specific environmental performance goals in mind. With help from Verosol's SilverScreen range of blinds, the award-winning project has achieved at least one of these – it is able to function throughout the year without air-conditioning.

Fans, underfloor hydronic, and blinds

If conservation and regard for place were the first steps on the path to sustainability for the SDS Studio, the next was ensuring it is carbon neutral. Now fully operational, it has achieved that goal. Its 260 PV panels generate all the electricity that it (and the other buildings on the property) require and it has no air conditioning. Instead, natural ventilation along with ceiling fans, underfloor hydronic system and high-quality performance blinds ensure the space remains cool.

In terms of blinds, Kok went with products from Verosol's SilverScreen Performance range. Manufactured using a unique technique known as "metallisation", the fabric used in these products features heat and glare reduction capabilities that are un-matched by any alternatives. Specifically, they have been demonstrated to reduce heat gain by 70 - 75 %. Considering the building's reliance on natural light, these products were a natural choice.

"We used them all over the project; particularly on the east and west facing windows, which receive the most sunlight," Kok said, adding that in order to optimize their performance, "all the blinds and windows are controlled by a building management system, which in turn, operates according to weather forecasting."

The effect of installing the blinds was immediate. "The difference is palpable. In summer, with the blinds down it feels really cool, then the blinds go up and you instantly feel that heat," said Kok. "We've had 40-degree days when we've managed to stay cool at 27 degrees with the assistance of just underfloor cooling and fans...It's testament to the performance of these blinds."

Beyond performance, Kok was also sold on the aesthetic contribution of the Verosol products. "They are quite discreet...their clean lines really worked for us, quietly supporting the architecture," she said. They contribute, in other words, to the stated goal of celebrating the building's (and the suburb's) industrial nature with the introduction of only unobtrusive additions.



Assistance & support

Asked if SDS had ever previously worked with blinds of this type, Kok explained that Verosol is their go-to supplier for blinds. "Over the years, across many projects, their input has been invaluable. They are always ready with advice about blind sizes and proportions, what the products are capable of...or even about how to approach challenging scenarios such as guide wires on angled/sloping windows," she said.

"They were very supportive throughout this particular project in helping us integrate the blinds with the building management system...as well as at the end of the project, where they made multiple visits to look at the blinds and advised us about how best to care for the products based on where they were installed in the building."

Since it was completed in 2020, the Smart Design Studio project has received an overwhelmingly positive response, including a plethora of local and international awards. Combined with the reaction of SDS employees, who have hailed it "a beautiful space to work in", this reception makes it clear that the renovation has been a real success.

For its part, Verosol is grateful to have received the opportunity to work on the project and to have helped SDS really show what is possible in terms of environmentally sustainable design.