

Verosol

**Sustainability
Awards** 



Sustainability eBook 2023
Verosol

The evolving landscape of sustainability

It is a fact that society's understanding of sustainability has broadened, leading to innovative design approaches and systemic shifts in behaviour.

Building design plays a pivotal role in shaping the sustainability of our urban environments. It is a powerful tool that can either exacerbate or mitigate environmental impacts. Firstly, orientation and layout significantly impact a building's energy consumption. Properly aligning structures with the sun's path allows for natural lighting and heating, reducing the need for artificial lighting and climate control systems.

Furthermore, material selection is crucial. Opting for locally sourced, recycled, or renewable materials not only reduces transportation emissions but also lessens the environmental footprint associated with extraction and production. Moreover, incorporating insulation and high-quality

windows enhances a building's energy efficiency, leading to decreased energy demands and lower emissions. Architects and engineers are increasingly integrating renewable energy systems into their designs. Solar panels, wind turbines, and geothermal systems can transform buildings into net energy producers, contributing surplus energy back to the grid. This not only reduces reliance on fossil fuels but also promotes a more decentralized and resilient energy infrastructure.

Water conservation is another critical aspect of sustainable building design. Implementing rainwater harvesting and greywater reuse systems minimizes strain on municipal water supplies and lowers the energy required for

water treatment. Additionally, green roofs and permeable pavements can mitigate stormwater runoff, reducing the burden on drainage systems.

In conclusion, building design is a linchpin in the pursuit of sustainability. Through thoughtful consideration of orientation, materials, energy systems, and water management, architects and engineers hold the power to create structures that harmonize with the environment rather than deplete it.

By prioritizing sustainability in design, we pave the way for a more ecologically balanced and resilient future.

BRANKO MILETIC, EDITOR

The Awards Jury



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Lifting the blinds on net zero, with Jules Di Bartolomeo, the MD of Verosol

This year marks the 60th anniversary of the epiphany Cornelis Verolme, the founder of Verosol, experienced when he saw New York's glazed cityscape for the first time. SilverScreen, Verosol's pioneering product range, was created only a year after that and has been leading the market as an unmatched solar control solution ever since.



Here, Jules Di Bartolomeo talks about the devotion to sustainability that has guided the company since inception, how Verosol blinds can help industry professionals achieve net zero emissions – and why their products should be considered a benchmark for every project.

A&D: Why is sustainability important to Verosol, and how does this commitment manifest through your innovative product range?

JULES DI BARTOLOMEO: This desire to solve widespread energy efficiency issues underpins the very conception of our brand, which means sustainability is in Verosol's DNA. Our founder, a Dutch ship builder, sailed into New York harbour in the 60s and was struck by all the glass-covered skyscrapers. He wondered how these buildings were able to stay cool in such extreme sun exposure, and after realising they were relying entirely on air conditioning, he decided to come up with a solution that would help solve this energy efficiency challenge. That's how he invented the world's only purpose-built machine to metallise fabric.

Today, we still hold the highest reflection of any fabric that's ever been produced – 85% – on our SilverScreen range. This reduces energy required to cool down the building substantially, and in colder months the blinds can be used to harvest the sun. You can put them up to allow the sun in, and then put the blinds down again to keep the warmth in.

In addition, the range also stops about 98% of UV coming into the building so our products can help provide a healthier indoor environment by maintaining a consistent climate inside the building, and minimising heat and glare, while reducing CO2 and energy

consumption all year round. And that's without obstructing the view nor access to natural light. So they can reduce the environmental impact of the construction, generate a healthier environment - and improve energy efficiency while decreasing the costs.

We even receive letters from people telling us how much their power bills have gone down since the blinds were installed. And that gives me goosebumps even though I know how our products work, and how amazing they are.

A&D: And do you have ranges of how much your products can help lower temperatures inside?

JDB: We can do an analysis on a building anywhere in the world. Once we know the location and the glass that's going into those buildings, we can simulate what the energy costs might be. For instance, we did that not long ago for a building in Perth, and it was a staggering amount of \$532,000 in annual savings in power costs.

Now, something we have won an award for in Europe, and will be introducing in Australia soon is the ability to give architects, designers and specifiers an idea of how quickly the blinds purchased for that building can become carbon zero upon the installation of our blinds. We can tell you that – for example – within 500 days from installation of our blinds you will achieve net zero, due to reduction in air conditioning emissions.

A&D: Can automation further augment these benefits?

JDB: Absolutely. The combination of motorisation, or automation to window furnishing provides enormous benefits, especially when combined with high performance fabrics. There is this symbiotic relationship here that results in having the best performing textiles on a window in the right place at the right time, all the time, without the need for human intervention. It really is the epitome of integration between humans and their natural environments, and the extraordinary benefits of Verosol's automated products are quite clear.

And it's worth adding that from a cost perspective, if you're looking at installing performance blinds, automation and motorisation will definitely help maximise return on investment. In fact, one of our CPDs focuses entirely on the workings and benefits of automation and motorisation of high-performing shades. With the ability to connect to the lighting system, the Building Management System (BMS), electronic devices or a phone app, it's really important to educate the industry on what automation can and can't do, how to go about it - and how to maximise its benefits, particularly where sustainability is concerned.

A&D: Architect education is something you've always been passionate about. What does the

future look like for Verosol, and what role does education play as part of these plans?

JDB: Preparing for a carbon positive future is a big focus for us. Our net zero emissions manufacturing plant in Australia is powered by solar energy which takes care of almost 100% of our consumption, and we have just finished trebling the size of our solar capability. In addition, as the embodied carbon poses an incredible challenge on the global scale, we have to start to measure the raw materials used during the manufacturing process, as well as the transport, and the transporting of your finished product. I want our people to be thinking about where we need to get to in terms of transitioning to electric vehicles, and being able to charge them on site. We are already investing in those capabilities so that when Australia catches up in terms of the required infrastructure, we will be ready.

The other part of that is continuously evolving the product. We definitely want to keep manufacturing products that tick all the boxes. We will continue pushing the boundaries of design and performance on the existing products, as well as coming up with new solutions – for instance, we're looking at how we can use less materials and less carbon in the making of our products, and we're exploring more sustainable metals that require less heat. There's a lot happening in that space.

And then, of course, education is a crucial part of our vision for a more sustainable future

because it's pivotal to promoting the most sustainable solutions in the market. From our perspective, it's an essential way to keep future-forward architects, designers and specifiers across all of our initiatives and efforts in this environmental space, as well as the innovative solutions we are working on, and help them learn how they can use them to maximise performance, introduce cost efficiencies and reduce carbon emissions – all without compromising on their design vision.

A&D: It looks like your efforts in this space are definitely paying off, and Verosol has become the go-to for many architects who are after high-performing and sustainable window coverings.

JDB: Look, we may not be the right product for every project, and we may not be the right price for every project budget – I understand that. But if you think about your perfect project, and you're thinking about sustainability and quality, then I think it would be irresponsible not to have organisations like Verosol up there as the benchmark. We invest in research and development, in technology, in sustainability and in architect education – and if I was to give advice to an architect looking for a high-performing product made by an organisation in a responsible manner, then they should start with companies like Verosol.

Commercial Architecture (Small) Award Shortlist



proudly partnered by Verosol

A Class 5, 6, 7 or 8 building used for professional and / or commercial purposes of under or equal to 500sqm in floor size.



C-SERIES END OF TRIP
GRAY PUKSAND



**COMMERCIAL TRAINING ROOM
REFURBISHMENT**
GRAY PUKSAND



DELATITE CELLAR DOOR
LUCY CLEMENGER ARCHITECTS

Award Winner

WINNER

DELATITE CELLAR DOOR
LUCY CLEMENGER ARCHITECTS

With sweeping views across Taungurung Country, the Delatite Cellar Door provides a unique wine tasting and dining experience located in the foothills of the Victorian Alps. The building utilises environmentally sustainable design principles and reflects the warmth and generosity of Delatite's owners in a new commercial setting.

Delatite are committed to sustainability via their biodynamic farming and wine production practices and aim to minimise their impact on the natural environment. The project is designed to respond to their established core values and be sensitive to place and the natural environment.



PRODUCT PHOTOGRAPHY Derek Swalwell.



SUSTAINABILITY AWARDS 2023 / VEROSOL / SUSTAINABILITY eBOOK 2023

Addressing the need for
urgent climate action with
Verosol window coverings

Off the back of the International Panel on Climate Change's sixth report, one thing is clear: the need for urgent action to improve sustainable outcomes across industry is more important now than ever before. Released last year, the IPCC's scientists have been tracking progress against the targets set in the Paris Agreement. They are now advocating for radical change - and a push towards the halving of emissions by 2030, and not 2050 - if we are to keep global warming to a manageable level in the long term.

It's against this backdrop that Verosol's window coverings offer architects and specifiers a means of implementing sustainable design principles, with impacts across a range of key factors. A specialist in the design and manufacture of interior shading fabrics and blinds, Verosol was founded with a commitment to sustainability and ethical governance at the core - making it no surprise that having a positive environmental impact sits at the heart of what they do. Here, we look at some of the most pivotal considerations underpinning their product offering.

EMBODIED CARBON

Embodied carbon – or upfront emissions – are one of the biggest areas of focus when it comes to measuring and reducing the carbon footprint of the construction industry. Embodied carbon accounts for all the carbon emitted throughout the design, construction, and fitout of a particular building. With key bodies like NABERS now benchmarking embodied carbon as part of the drive towards Net Zero buildings, designers and specifiers must take close notice of the carbon profiles of products they specify. With this in mind, Verosol has received Environmental Product Declarations for its performance fabrics, enabling confident - and third-party verified - specification of their products.

INDOOR ENVIRONMENT QUALITY

Amidst a general understanding of, and move towards, the sustainable benefits afforded by a biophilic design approach, maintaining good indoor environment quality is crucial. Two aspects are key here: light, and air quality - and both can be positively impacted by thoughtful choice of window covering. By controlling glare while taking advantage of natural light, sustainable window coverings can bring the outside in while still maintaining thermal comfort. Similarly, products that are low-VOC protect the wellbeing of occupants and improve the health & safety ratings of a particular building.

Verosol's flagship SilverScreen employs a process called metallisation to apply a microscopic layer of aluminium onto a range of fabrics for use as window coverings. Doing this invests the fabrics with a range of material properties that promote a comfortable indoor environment as well as better sustainable outcomes. SilverScreen fabrics reflect up to 85% of solar radiation, reduce SHGC, virtually eliminate UV radiation, and significantly reduce glare – all while leaving residents' occupants' view to the outside world unaffected.

ENERGY EFFICIENCY

While it's important to have low embodied carbon (or upfront emissions) in any project,

it's just as important to keep the operational carbon footprint - that is, using sustainable fixtures - if a net positive impact is to be achieved. Verosol's SilverScreen window coverings can impact this in two ways. First, automation: when incorporated within a building management system (BMS), an automated window covering can be optimised and operated with reduced energy expenditure and movement according to prevailing climatic conditions, for example operating whilst tracking the sun, or in-line with the building management strategy. Second, this directly correlates with a reduction in the need for intensive heating and cooling - understood to be one of the most energy-intensive actions in any building. Naturally, as pioneers in this space, Verosol's range of innovative products is suitable for automation, and can be incorporated into existing smart buildings.

With these environmental considerations underscoring Verosol's product innovation and development, their range of shading materials and blinds make for an efficient, effective and low-embodied carbon solution. So, as the need for climate action becomes increasingly urgent and a whole-of-lifecycle approach is prioritised, specifying high-quality, sustainable window coverings like Verosol is sure to provide lasting peace of mind not just for architects and designers, but for occupants as well.

Leading sustainable specification with Verosol

When it comes to sustainability, all products are certainly not created equal. And, more to the point, there are significant differences between products that claim similar sustainability credentials. That's why it's essential that architects and specifiers opt for products and companies that have achieved verified independent third-party certifications, and undertake voluntary environmental initiatives like stewardship programs.

However, despite best intentions, the reality of the modern construction industry is that the final product does not always match the original design. Often, ambiguity in specifications can lead to last-minute substitution with inferior products onsite, meaning the intended benefits of a particular product are lost in the process. When substitutions take place, the substituted products are often cheaper, but lack the performance and credibility (particularly where sustainability is concerned) of the original product.

The simple fact is that builders may not be aware of an architect's original reasons for specifying a particular product, leading them to make choices that are incongruous to the overall design intent.

That's why, architects and specifiers have a significant role to play in this regard, by ensuring that products are installed as specified, and by making it clear to builders that the specified products are part of the project spec and have to meet identical (or better performance) to accept alternatives.

Architects are stepping up to their role as climate leaders, with the responsibility for driving future change. And to support this, leading manufacturer and supplier of blinds and window coverings, Verosol, has adopted a product stewardship approach to their business. This means taking responsibility for the full lifecycle impacts of their products from cradle to grave, and doing everything within their power as a producer to minimise that impact. Verosol's approach to Product Stewardship is comprehensive, and focuses on four areas.

TAKE BACK PROGRAM

Verosol is currently developing a program to reclaim old and disused Verosol products via a rebate system. Products will be broken down to their raw constituent materials and sorted for sustainable waste management.

WASTE TO ENERGY

Acknowledging that waste can never be reduced to zero, Verosol has formed a partnership to turn suitable waste products into a ready-to-use alternative fuel.

WASTE RECYCLING

Waste that is not suitable for the Waste-to-Energy program is diverted from landfill wherever possible, with recycling frameworks currently in place for aluminium, cardboard, and fabric.

MATERIAL REUSE

Offcuts and reusable by-products from the manufacturing process are being made available for resale where the products are suitable for other purposes, or being repurposed by Verosol to make new products such as tote bags.

In addition to this product stewardship commitment, Verosol has achieved numerous certifications relating to their products - including Environmental Product Declarations (EPDs), Greenguard and Greenguard Gold

Certification, Global GreenTag: Product Health Declarations (PHD's), HealthRate, GreenRate, LCARate, Best Environmental Practice PVC, REACH and RoHS Compliance, as well as Cradle to Cradle (C2C). Each of these makes it easier for architects and specifiers to know exactly what they're selecting, and its overall environmental impact.

Furthermore, architects and designers who specify Verosol's products can rest assured knowing that the company's manufacturing facilities in Australia and the Netherlands prioritise efficiency. Verosol achieves this through various initiatives aimed at reducing its carbon footprint, including the installation and expansion of rooftop solar capabilities, the adoption of energy-efficient lighting, the electrification of production processes, and the transition towards a net-zero manufacturing operation.

With the responsibility of not just creating beautiful, fit-for-purpose designs for the built environment - but acting as leaders in the push towards a more sustainable industry, architects can rely on certain manufacturers to help with some of that lift. To do this, it's essential to select products that have been through rigorous testing and certification processes, from companies with sustainability in their DNA. With environmental considerations at the centre of everything they do, Verosol is certainly one of these companies, and they are committed to working closely with industry professionals to not just advance but lead the climate agenda across the sector.



