VISION

ISSUE 50

UNDER THE MICROSCOPE

Monash University Biological Sciences Laboratory, Victoria

BLACK ART

Northcote House, Melbourne

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Monash University Biological Sciences Laboratory, Victoria

Viridian performance EnergyTech™ glass provides the eyepiece, magnification lenses and window into a whole new way of seeing in one of Monash University's more intriguing buildings. The architecture of this Bio-Sciences hub offers numerous insights as to how architecture can add to the discovery of place and streamline functionality.

WATCH ARCHITECT PHILIP HARMER IN CONVERSATION

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'Ross' Northcote, Victoria

Bold, black and light-filled, the Northcote house by Ola Studio is an artful contradiction. What might appear weighty or ponderous by virtue of its largely black envelope, is in reality a house of light. Screened in a metal skin and Viridian performance glass, the house is a graphic arrangement of function, flexibility and elegant aesthetics.

Acknowledging neighbours with its distilled bungalow form, the design references history to realise a sleek modernity. Once inside, the house flows in a sequence of interfluent spatial rhythms.

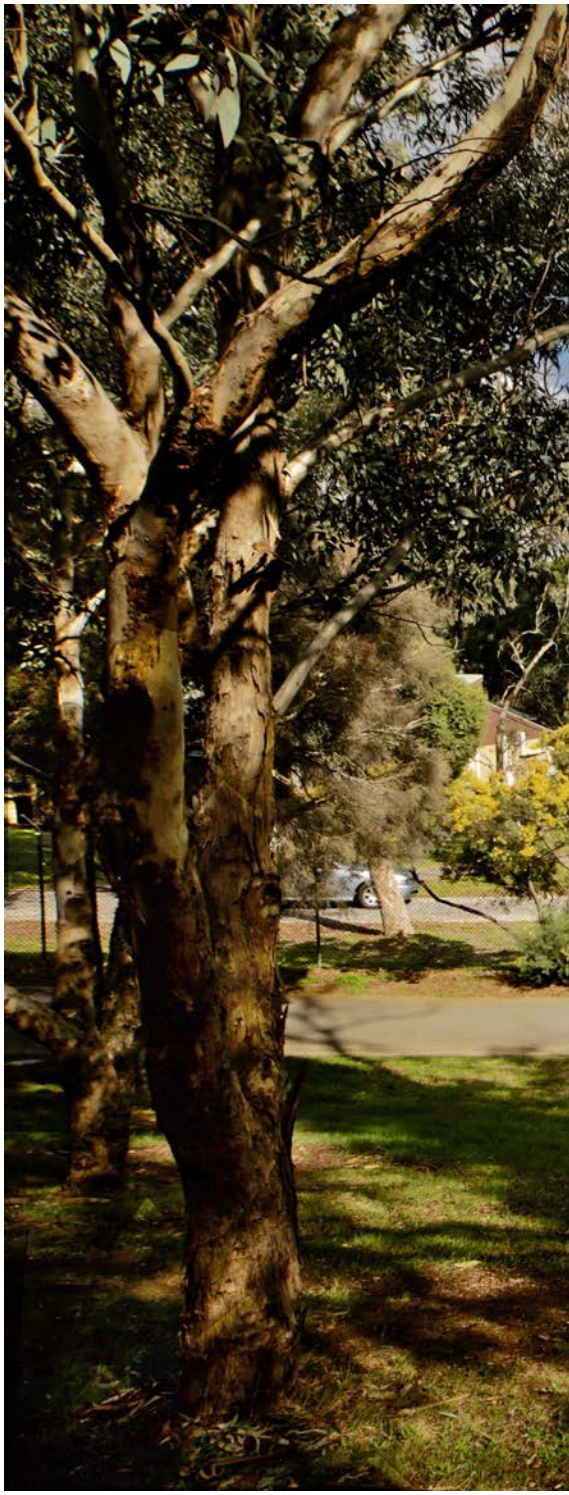
Built to house a family of five, pet dog and art collection, the owner/builder clients wanted a house of warmth and easy liveability. The brief recognised a need for the luxury of light and space. And this one delivers in spades.

WATCH ARCHITECT PHIL SNOWDON IN CONVERSATION


UNDER THE
MICROSC

COPE

Architecture as imitation can quickly dig itself a larger-than-life hole. Philip Johnson's AT&T Building as an overblown Chippendale Chair cast a giant shadow on an otherwise stellar legacy. Others, including Frank Gehry's Binocular Building in LA are literal in the extreme. For many, the Basket Building in Newark Ohio, is little more than novelty basket-case.



Melbourne's Harmer Architecture Bio Sciences Building for Monash University runs the gauntlet of mimicry. But rather than parody or 'theme-scape' of science fiction on steroids, or caricature, Harmer's design is all subtlety and nuance.

Located in the protected native landscape Jock Marshall Reserve, Harmer's fan-shaped design is tightly calibrated to setting and purpose.

Sparkling in the spring light, here science as art is wrapped in a ribbon of Viridian EnergyTech™ performance glass punctuated with strategically placed circular windows – eye-pieces to a magnified world.

The building forms a new gateway to the JMR Reserve from College Walk, which accesses the Monash Halls of Residence. The main internal space is a laboratory for collaborative environmental study into the science of plants and animals.

The laboratory collaborative learning area is divisible into two spaces each for 52 students and the external balcony/deck provides a long bench for sorting and washing of samples collected in field-work.

The eyepiece entry tube forms the gateway to the reserve and stimulates curiosity in visitors to discover what can be investigated in this unique natural environment.

PROJECT
Monash University Biological Sciences Laboratory, Victoria

ARCHITECT
Harmer Architecture

PRINCIPAL GLAZING
Viridian EnergyTech™ Clear

TEXT, IMAGES & FILM
Peter & Jenny Hyatt

“The ocular windows are a clear reference to the idea of a microscope for students to look at the natural world through lenses and apertures.”

PHILIP HARMER, ARCHITECT

Vision's Peter Hyatt spoke with Philip Harmer about a project of rigour and elegance:

VISION **What's the standout quality about this project?**

PHILIP HARMER It's a small building in a big landscape on an urban campus. We had the opportunity of master-planning the whole protected nature reserve. It was a fantastic opportunity to say, maybe this building can look like a device for viewing the natural world. The ocular windows are a clear reference to the idea of a microscope for students to look at the natural world through lenses and apertures.

How far do you go with pushing the appearance of the microscope without lampooning itself?

Well exactly. It was presented to the university as a concept in plan and forms a reference to a microscope. The entrance is actually the eyepiece and the two ocular lenses to the laboratories actually look at the natural world on the reserve side. It's a subtle reference. I think buildings are far more interesting if they're lyrical and speak about ideas rather than just follow some form-based solution. It was a great opportunity and the university thought it was terrific. It expresses what they do.

What did you learn from this quite special landscape?

The landscape is viewed as a slice of the environment. From inside, there's this slice of landscape as a panorama. We had to be very careful that tree removal was minimised and early on the idea was that it would be a building elevated and not just 'dug in'; rather it had a 'floating' ground floor plane and the decision was to capitalise on the elevated floor plate with the strip window that follows all the way around the building.

WATCH ARCHITECT PHILIP HARMER IN CONVERSATION

Any other influences?
There is a focus on water life and the lake, so there's a focus on the biology of the natural. The other consideration was that it's like a big holiday house. The school needed space for waders, nets, gum boots and even a boat, so the lab adopted the role of looking like a holiday house with the storage underneath. You go to the beach, or natural environment, with your equipment and then come home to the deck, the back veranda, wash it out in the troughs and then study it in the lab.

The lab touches the ground on the north side and floats above the site to the south where the sight-lines are very firmly directed towards the tree-tops.
That beach house feel is there, it definitely avoids any monumentality. The building as a scientific device appears as separate top and bottom components joined by a continuous ribbon of glass framing views of the landscape in all directions from inside and views of activities within from outside.

That cylindrical entrance makes this quite a processional experience to transition into and out of the building.
It's a small building with quite a large entry area that connects through to the reserve. You can walk through the eyepiece tube into the building, turn right at the laboratories or keep going and just a slight right turn out onto the deck. It's actually a route through to the park as well as a laboratory entrance.

"The building as a scientific device appears as separate top and bottom components joined by a continuous ribbon of glass framing views of the landscape in all directions..."

PHILIP HARMER, ARCHITECT

What else does glazing help you achieve here?
There are two halves to the building – the top and bottom – and so to express that we didn't want anything connecting the two halves. In order to provide a transparent void separating the two parts, glass is obviously the perfect material. As well as that, where you walk out towards the reserve is completely glass with an electric door and a big piece of glass facing the entry side so in addition to a continuous ribbon around the building, glass fills in those quite large voids front and back.

Any thoughts about the way you would work with glass now that you might not have considered 20 years ago?
We look at it very differently now with new environmental standards, particularly in double-glazing. We also try to express its beauty like in this case where it's just channel glazing with glass in a slender steel frame, rather than just putting it into a glazing rebate of chunky aluminium frame. We're very interested in that elegance and the crispness of large double glazed sheets but also understanding the nature of the material and proportions. In this case they are very long pieces, which is tricky for handling onsite, so you have to understand those imperatives.

What does your main contact with Viridian involve?
When we need advice on coatings and reflectivity and environmental factors. We also need Viridian's advice on thermal issues. Generally structural engineers will provide advice on thicknesses and wind-load and the like. We need to know from Viridian about new technologies in high-performance glass and we are finding that we need that advice more and more for environmental sustainability imperatives.

"We're very interested in that elegance and the crispness of large double glazed sheets but also understanding the nature of the material and proportions."

PHILIP HARMER, ARCHITECT

So the lab is really about using the best materials for the task?
Our work is concentrated, more lyrical and so glass isn't looked at as a material or result in itself. If it's a round building, if it needs a round window, that's not about the glass so much as glass supporting the idea. A lot of designers get excited about materials and want to express the material itself in the building. I'd like to think we do the exact opposite. We want to introduce interesting ideas and theories and make buildings express those ideas and the glass is a means to an end rather than an end in itself.

What do you feel about the capacity of glass to provide what the British architect Peter Cook refers to as the 'glister, glisten and gleam' of glass to generate the lively, rather than dead surface.
That's right and that will vary on the time of day and weather and sometimes it'll be a complete mirror, like our ocular windows at JMR. Sometimes it can be if it's early in the evening and the lights are on and it's completely transparent. That's why it's special.

Apart from the health benefits of opening interiors to natural light, glazing can liberate and visually, if not physically, release occupants into the landscape.
That's right. I think what you're referring to is the framing. It's broadly used and misused, but framing is incredibly important with windows and glazing delineates a line in space in an interior what you see when you look out. In this case JMR's a perfect example in that it has a high-ish window sill, plus there are lab benches everywhere, and quite a low-ish window head. But that view is enjoyed mostly by people sitting on stools, so that's the stool-height strip, if you like, for up to 100 students looking at the microscope then looking out the window. That's the focus of action.

PROJECT
Monash University Biological Sciences Laboratory, Victoria

ARCHITECT
Harmer Architecture

BUILDER
Hutchinson Builders

ENGINEER
BSC Building Consulting Engineers

GLAZIER
Citiglass Pty Ltd

GLASS SUPPLIER
Viridian

PRINCIPAL GLAZING
Viridian EnergyTech™ Clear

BUDGET
$1.7 million

BLACK ART

WATCH ARCHITECT
PHIL SNOWDON
IN CONVERSATION

Architecture frequently produces a great divide. When it polarises opinion, it is mission accomplished for many architects. Better still when it rises above difference for its own sake and transforms public perceptions.

The Northcote House by Ola Studio is a design with the potential to divide – and unify. If it has detractors, then it also has a big fan base. In the process of posing questions, it also provides plenty of answers. Does it complement its streetscape, or challenge the status quo for a new direction and approach?

Cloaked in black with windows strategically sized and located, Ola's design is architecture as liveable sculptural art. Viewed within the context of the street it's an upstart neighbour, but considered more broadly, the house is contemporary architecture at its best. It is of its time and without obvious allegiance to old ways of living or building.

Think Grand Designs and Kevin McCloud hosting of the British Architects short-list of 'best house' and, apart from the tyranny of distance, this project could quite comfortably enjoy such an international screening.

Pritzker laureate and now jury chairman Glenn Murcutt extols architecture of 'privacy and prospect'. In other words, occupants enjoying the best of both worlds – able to retreat from the hubbub, yet feel immersed in the best of their surroundings.

It's a mantra instinctively understood by architects interested in public engagement and private shelter. The Northcote House is exemplary with its decisive, graphic envelope of steel, aluminium and glass that speaks so fluently to its site and neighbours. And it's a beauty much more than skin deep.

PROJECT
Ross, Northcote, Victoria

ARCHITECT
Ola Studio

PRINCIPAL GLAZING
Viridian EnergyTech™ Clear
& ScalaTexture™ Satinlite

TEXT, IMAGES & FILM
Peter & Jenny Hyatt

Vision editor Peter Hyatt speaks with Ola's Phil Snowdon about a house dressed in a dinner suit with a holiday vibe:

VISION **What were your key design drivers?**

PHIL SNOWDON The house sits within a diverse heritage precinct. Informed by our clients' love of stark materiality and clean aesthetics, it provides a warm and joyful environment. Their new suburban home alludes to the lofty spaces of the converted warehouse they owned previously. Being nestled within a private garden, 'Ross' completely satisfies our clients' brief. The house is a bold sculptural piece elegantly defined. The public facade and entry, the living area within a secluded garden, and the private realm upstairs, provide uniquely evocative environments. Upstairs is wrapped in black vertical aluminium angles and is a study in dealing with domestic privacy within the urban environment.

A house apparently of shadow is quite the reverse to experience.

Light is an important theme in this house. The gable running the length of the house tapers in scale and peels away from the southern boundary to ensure sunlight is maintained for the neighbour. The reduced scale sees a house-like silhouette floating in the backyard over the living spaces below. The long northern aspect is carefully designed with passive solar principles and the rear garden is cut into the land creating a deep courtyard and in turn managing the afternoon sun. The house is powered by a photovoltaic installation. There is ample insulation and the house is shaded by the skin of battens, overcoming the thermal issues around a black house.

"The reduced scale sees a house-like silhouette floating in the backyard over the living spaces below. The long northern aspect is carefully designed with passive solar principles..."

PHIL SNOWDON, ARCHITECT

"Downstairs, the glazing allows occupants to be one with the garden. Upstairs it's more about privacy and filtered light with the whole building wrapped by a screen."

PHIL SNOWDON, ARCHITECT

A veiled outlook is provided from the top level, while full-height sliding doors open to the ground level garden.
The ground floor space is immersed in landscape. Upstairs a veil of battens provides private outdoor garden spaces awash with dappled light that change through day and night. The light softly illuminates the sculpted interior of the internal spaces. A long void creates view lines between the various external spaces, emphasising the importance of garden and connecting the realms of the house.

The minimal aesthetic of the interior allows the house to act as a gallery for the client's art collection. The sculptural elements of the steel stair and concrete kitchen bench engage in conversation. The use of mass materials to form detailed interior objects contrasts to the external form that is singularly defined by light and repetitive elements.

How critical was the input of others?
It took a three-way collaboration between architect, owner and builder, and we laboured continuously to deliver a well-balanced cost to quality result.

Controlling daylight might sound easy, but not everyone can.
Light was really important to the clients. They lived in a warehouse full of natural daylight for a number of years and wanted to keep that quality of light while linking to the garden where possible. The difficulty was making it perform so that we're getting the required thermal performance.

The benefits of glass are pretty plain and clear for all to see here.
They are. Downstairs, the glazing allows occupants to be one with the garden. Upstairs it's more about privacy and filtered light with the whole building wrapped by a screen. The glass allows a way of feeling the presence of that screen and the outside conditions without being exposed to them when they are not pleasant.

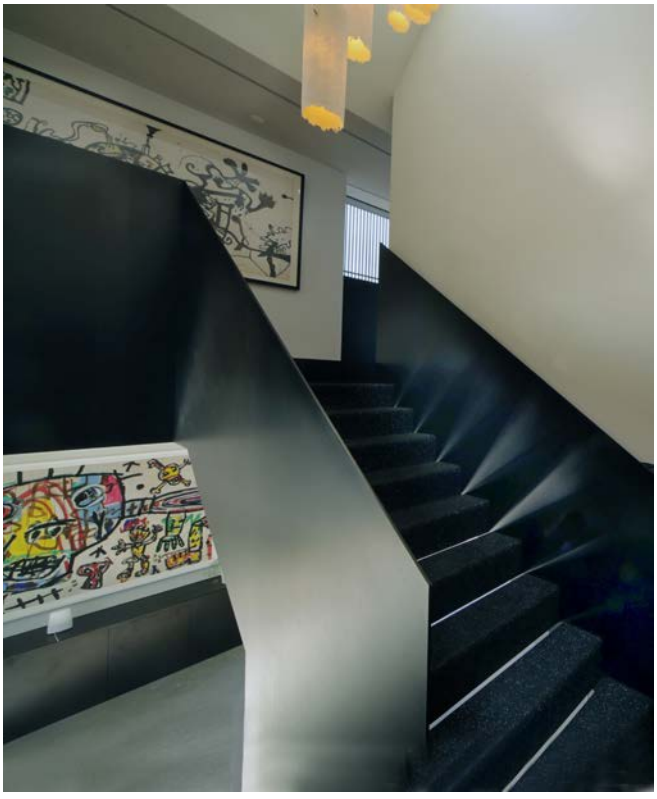
"We like to encourage natural ventilation by providing lots of operable glazing so you can be attuned to the environment rather than rely on air conditioning."

PHIL SNOWDON, ARCHITECT

Is it a house that gives more back than it asks of the clients?
We really like when people are attuned to their environment and decide to open windows and doors whenever they want to be comfortable. We like to encourage natural ventilation by providing lots of operable glazing so you can be attuned to the environment rather than rely on air conditioning.

Is there an area in the house which really celebrates or captures the essence of what it was you've tried to do here?
I think the space right here really captures the essence – this is the main space, this is the hero space. This whole living, kitchen area and the staircase that divides the space really speaks of the detailing. I think that quality is carried right through the house.

How did you reconcile the myriad of complexities required for this design?
We just work through a whole lot of different ideas until a solution starts really working. We look for something that has clarity, that's serving the needs of the brief but has a real, defined character. It's very hard to pinpoint when that moment of clarity happens, and the plan starts to really makes sense.



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PHIL SNOWDON, ARCHITECT

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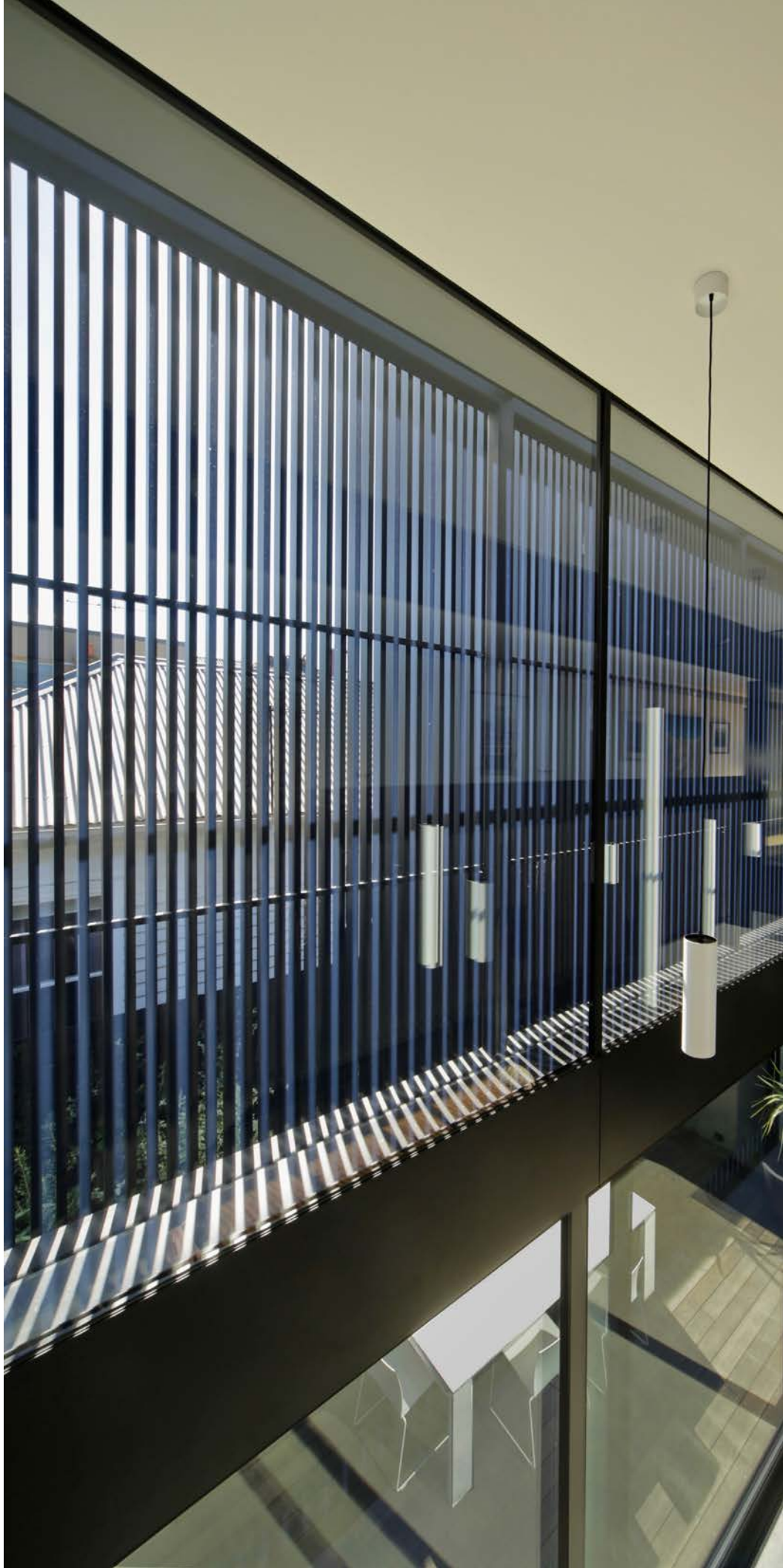

Were you inspired by specific examples of modernism?
Alvar Alto. We have so many inspirations. It's a complex question. You're always taking from things that you love, things that you've looked into and studied. You're always trying to capture the lessons you've learned in a new and fresh way.

What was Viridian's key appeal?
Viridian's the go-to for me. It's the company I first think of when it comes to glass, and it's the people I contact to work through the types of glass we should use. They have a great range of products and some really great looking locally sourced products. Their website is very easy to use and the people we contact are always very helpful.

There's a deceptive amount of glass across both levels. Were there many issues with privacy on both sides of the fence?
One of the key parts of the brief was privacy coupled with viewing as much garden as possible. We had to consider privacy and outlook at the same time, so the garden is really set-down and cut into the land to provide a private courtyard that is connected to the interior by large panels of glass. Upstairs we've screened all the glass to help with privacy.

As the architect, what have you brought to this house that others may have missed?
There's such complexity in getting all of the alignments correct, the spaces and volumes right. An amazing amount of time goes into making sure all the spaces are properly proportioned and that the smallest to largest elements are all fully considered. Viewed from the outside, it's really a single sculptural piece that just sits in place, and that same single sculptural piece also defines a myriad of different interior spaces.

"Viewed from the outside, it's really a single sculptural piece that just sits in place, and that same single sculptural piece also defines a myriad of different interior spaces."

PHIL SNOWDON, ARCHITECT

What if any other issues arose with such a formidable glazing program?
The framing systems were probably the biggest challenge. We could get the glass size – that was fine – but the challenge was sliding door panels and systems that would meet the engineering requirements and guarantees.

What does this house say about the direction of your architecture?
Architecture involves a lot of trust from the client, and it's hard to win that trust until you've built up a body of quality work. With the completion of every great project, we hope to enable more trust in our vision.

Do you need to be in locked step with your clients' ambitions?
You do. It could easily be seen that we're just designing to get better work and it doesn't really matter what the client's seeing. But for me, the best outcome is when the clients really love the place you've created. I think hopefully that will help promote our business as well. A happy client should be the best form of advertising.

PROJECT
Ross, Northcote, Victoria

ARCHITECT
Ola Studio

BUILDER
Wade Lovich and Sacha Allen

ENGINEER
Tim Gibney and Associates

WINDOW SUPPLIER/INSTALLER
Creative Windows

GLASS SUPPLIER
Viridian

PRINCIPAL GLAZING
Viridian EnergyTech™ Clear
& ScalaTexture™ Satinlite

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