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# GUIDING LIGHT

St. Michael's Parish School, Melbourne

Even junior schools are seeing the light with architecture as instrumental in the delivery of education. The newest 'wing' at St. Michael's Parish School by Y2 Architecture is a case in point. A taut material palette highlighted by Viridian performance and coloured glass, communicates vista and a beguiling array of internal lighting effects.

Stripped back design doesn't need to read 'impoverished' or 'dull'. Y2 ensures St. Michael's is off to a flying start with an addition as treehouse. A heightened awareness of light fall and light play are the ever-present background to a functional, robust design.



WATCH ARCHITECT GARY THOMPSON IN CONVERSATION





# LIGHT HOUSE

My Ideal House, Sydney

Viridian's performance LightBridge<sup>™</sup> glazing is a key to the competition winning project home by architect Madeleine Blanchfield. Elegant assembly and quality materials shape a result offering a comprehensive range of uplifting and sustainable alternatives.

Full-height sliding glass is just a part of a design to re-imagine the suburban experience. Efficient daylight harvesting with thermal integrity are at the heart of this winning work.





WATCH ARCHITECT MADELEINE BLANCHFIELD IN CONVERSATION





### 'Optimistic' architecture is a subjective quality but one worth pursuing when it comes to education. Feelings of connectedness, opportunity and hope are all possible in an atmosphere where design does its job.

Interestingly, Y2 took its cues not merely from the program at hand, but referenced one of the greats in the search for a design solution. They found it in Le Corbusier's masterwork at Ronchamp Chapel in the French countryside – 16,487kms and 67 years away from this small parish school in Ashburton, Melbourne.

St. Michael's Primary reveals jewel-like elements in its glittering, light-filled addition to this school of 240 students. Y2 Architecture's homage to Corbusier's best-ever building, pays off handsomely with this multi-faceted learning wing. An understanding of daylight as a sculptural element is key to the serious business of playful design.

In an era of open and kinder education this new building opens to the outside world but, equally, is fully connected within. Large sliding glass doors between classrooms across two levels and adjustable, operable windows are distinct clues to this new teaching and learning model.

Fully flexible and light-filled, Y2's design isn't all expanse or revelation. There's also enclosure with areas for retreat and rest via a series of study pods or perches. Modelled on the idea of the tree-house, the building provides eight classrooms – theoretically expandable into two huge single volumes – or the more commonly used separate rooms. A circulation zone and locker area on the south runs across two levels and is serviced by a staircase at either end.

#### PROJECT

St. Michael's Parish School, Ashburton, Victoria

#### ARCHITECTS

Y2 Architecture

#### PRINCIPAL GLAZING

Viridian Double Glazed Unit using EnergyTech<sup>™</sup> Clear EnergyTech<sup>™</sup> Clear (6mm)ComfortPlus<sup>™</sup> Clear (10.38mm) SpectraPrism<sup>™</sup> Ruby Red & Custom Colours SpectraSeraphic<sup>™</sup> Custom Colours LuminaMist<sup>™</sup> Clear

TEXT, IMAGES & FILM Peter & Jenny Hyatt







"The building is obviously just bricks, mortar and glass, but it really provides a wonderful place for learning and for aspiration. It's light filled, it's contemporary. It's engaging with the teachers, the students and the community."



L-shaped in plan, the building runs parallel with busy High Street on the north with a return on Morotai Ave. To the west with its frontage on busy High Street, this small school suddenly has a much bigger presence by means of quality rather than quantity. A full-height grillage of clear and coloured panels forms the centrepiece of the main, north-facing, street elevation. The use of multi-hued lozenges is repeated on the east and west ends with the motif of divine light as playful, animating gesture.

Panelised walls of Viridian performance glass and SpectraPrism<sup>™</sup> result in a facade of enriched detail and interior effect.

Vision's Peter Hyatt spoke with Y2 project director Garry Thompson to discuss the rise of the classroom as tree house:

VISION Is there a memorable project moment? GARRY THOMPSON Walking with the community at the opening and experiencing the space that has taken years for them to envisage. All of a sudden it was tangible, that's the most memorable moment.

For a school that's always dreamt of something better, the roll-out must have been a most remarkable gift. It was an epoch moment for the school in the way that their education is shifting. The leadership of the school changed. This was really a delivery to bring the school and Parish community together in a succinct project.

#### There is a cellophane wrapped quality where we see the 'gift' within. We see children playing and learning inside and out.

The building is obviously just bricks, mortar and glass, but it really provides a wonderful place for learning and for aspiration. It's light filled, it's contemporary. It's engaging with the teachers, the students and the community.

Gary Thompson Y2 Architects

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VATCH ARCHITECT GARY THOMPSON N<u>CO</u>NVERSATION 9

"The use of multi-hued lozenges is repeated on the east and west ends with the motif of divine light as playful, animating gesture."

VISION



# Does the school represent the wider transformational shift in the way education is delivered?

It's a paradigm shift. What we're seeing at this school now is that we've moved away from teacher centred learning to student self directed learning. It's about offering flexible teaching skills and the ability to cater for all students of different abilities, class groups and environments. This is a parallel world now compared to where we were at the start of this project.

# Were there challenges that tested your resolve and creativity?

The challenge was not to do with the briefing or anything like that. It was a really challenging site to build on. It is sited close to a main road and we weren't allowed to close that road that happens to be right up against the school boundary. That provided many challenges for the construction sequence. We earned our fees definitely in delivering that on site, as the builder did. We had to close the school a few times to lift concrete panels across existing buildings. It was a challenging one to build, but it's there now.

# "...the play of the light through the windows and the coloured glass is really how the building connects to the outside."

GARRY THOMPSON, ARCHITECT







# "We took some cues from Corbusier's Ronchamp with the beautiful natural play of light within the internal spaces. The coloured glazing links back to the stained glass of the chapel."

GARRY THOMPSON, ARCHITECT







# What conversations did you have with the staff and students?

Preparation extended for a number of years before we had the funds to develop the school. The conversations were not only with the teachers and the students, but the parish. This is a parish project. It's greater than just the school. It entwines all of those aspects and involved parents as well.

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The conversations were around what this school meant to the parish. We had to provide some tangible links to what that was and it was around the idea of the village that raises a child. That grew into a tree and a seedling that you nurtured and that becomes a tree.

There's some really lovely playful elements within the building that are sophisticated. They cater for the child, but they're not child-like. They're quite lovely. So we've got tree houses that you can learn in. There's a tree structure in the building. There are some other aspects, obviously it's a Catholic school, so we had to make some tangible links to the Christian faith and did so through the use of coloured glass. We took some cues from Corbusier's Ronchamp with the beautiful natural play of light within the internal spaces. The coloured glazing links back to the stained glass of the chapel.

#### Any other design drivers?

We identified the school's needs to deliver spaces that told a story. It's not just a space for learning, it's a story about the school, the building, the way the building works and an example of a tree-house. Seated within a tree that envelops the double-story volume. There are little, nest-like, spaces for quiet reading and another area to perch, break out and enjoy collaborative learning with small groups of students. "It's just a wonderful glass panel and we've got the availability of multiple colours and from that we selected a very sophisticated, but inviting and energetic colour range."

GARRY THOMPSON, ARCHITECT



#### The results through using glass are impressive. You could have simply had solid walls and inserted conventional windows as little rectangles.

There is a wide variety of glass used here. All of the north facing glass is the high energy efficiency variety. There's a lot of curtain wall glass, but the double glazed units while providing acoustic benefits from passing traffic also provided absolutely beautiful light control throughout all learning spaces.

We are literally without need for artificial lighting throughout the building. It's got an abundant and lovely natural light. In addition to that connection with the stained glass windows in the chapel. We've got coloured glass panels that provide a journey of colour throughout the learning spaces during the day.

# And the influences here are much more residential than institutional.

Schools historically have been institutional, but are no longer like that. There is that homely environment because the way teaching and learning has changed. It's no longer a teacher at the front of the classroom and 50 students, all seated in rows. We provide a tree house setting with warm hues of timber, soft furnishings and a lovely homelike environment.

# A quality offering is less likely to be abused, trashed or prematurely worn out.

That's certainly the case. Not only the teachers are respectful of their environment, but students are engaged with the building. There is ownership, there's no doubt about that ownership. Historically schools are messy environments with paper everywhere. This is actually quite ordered and that is the way it's maintained.

"There's a lot of curtain wall glass, but the double glazed units while providing acoustic benefits from passing traffic also provided absolutely beautiful light control throughout all learning spaces."







### "An understanding of daylight as a sculptural element is key to the serious business of playful design."

VISION



# How happy have you been with the use of Viridian's SpectraPrism<sup>™</sup> range.

It's just a wonderful glass panel and we've got the availability of multiple colours and from that we selected a very sophisticated, but inviting and energetic colour range. It worked in the colour glass panels with the timber warm hues that are in the tree houses and gallery type environment. So the rest of the play of the light through the windows and the coloured glass is really how the building connects to the outside. It's that awareness of connection internally and externally with the natural light.

#### It's not just a building about looking out or in. It's the magic that's often difficult to design by numbers or computers.

The really interesting thing about this learning environment is that it's a space for all seasons of the day. From the early sunrise, the colour comes through, and at midday the glass panels change to something quite sharp, bright, more intense. As the sun goes down of an evening, all those warmer glass colours are revealed in another light.

#### What about thermal control and glare for example?

We worked very closely with Viridian throughout the design process in terms of the glazing colours and final efficiency. They knew our design intent. The thermal efficiency of the glazing and the double-glazing provided our acoustics and thermal controls while the SpectraPrism<sup>™</sup> glazing contributed to the ambience. There were no issues or hesitations from Viridian in helping us achieve our design brief. It was challenging for them as the client challenged us with the design brief. While real sustainability goes well beyond Green Star ratings you have put great emphasis on locally-sourced materials in that supply chain life, from cradle to grave. We were very, very, focused on Australian suppliers and even closer, local suppliers such as Viridian. We selected materials with low embodied energy in their production, with a long lifespan and so the whole life cycle costing. The building itself is designed around sustainable design practices. The orientation, overhangs, natural cross ventilation and so on. It was designed from the ground up on passive design principles and from the design and supply-chain of sustainable products.

# How do you hope it will be experienced by the passing parade of motorists and pedestrians?

We had a very challenging brief needing to distil three aspects into the brief, but at the forefront was the need to deliver upon good urban design principles. We needed robustness in the public realm fronting onto a main and side road. We need to engage motorists in a different way to pedestrians. The transparency at that pedestrian level is also wonderful because you actually engage directly with the teaching and learning.

#### Some projects are torturous, others occur organically. How was the experience with this project?

The design process was quite cathartic. The school was so engaged with design ownership from the start. We knew we were going to deliver and we knew the success from the first time we rolled out our drawings from the first sketch. It's one of those lovely projects that every architect experiences. Every five or six projects one of these come along and you just know it was meant to be how it ends up, because it actually distils everything we envisaged. It's testament to the strong bonds in the relationships formed at the start of a project.

"We were very, very, focused on Australian suppliers and even closer, local suppliers such as Viridian. We selected materials with low embodied energy in their production, with a long lifespan..."







#### PROJECT

St. Michael's Parish School, Ashburton, Victoria

ARCHITECTS Y2 Architecture

**INTERIOR ARCHITECTURE & DESIGN** Y2 Architecture

**STRUCTURAL ENGINEER** Kersulting Engineers

BUILDER 2Construct

WINDOW SUPPLIER/INSTALLER Thermal Glass

#### **GLASS SUPPLIER** Viridian

**PRINCIPAL GLAZING** Viridian Double Glazed Unit using

EnergyTech™ Clear EnergyTech™ Clear (6mm) ComfortPlus™ Clear (10.38mm) SpectraPrism™ Ruby Red & Custom Colours SpectraSeraphic™ Custom Colours LuminaMist™ Clear

**BUDGET** \$3.8 million (construction)











WATCH ARCHITECT MADELEINE BLANCHFIELD IN CONVERSATION



Sydney architect Madeleine Blanchfield's successful design for the 'My Ideal House' competition is a showcase of possibilities. Rather than weight and mass, the response – from a nation-wide field of more than 70 entries – exhibits a Rubik's Cube flexibility.

And it's not at all about an eye-watering budget so much as clever design brimming with function and generosity. With a reputation for high-end houses, Blanchfield's house offers high levels of customisation and flexibility within a modular platform.

Based on an initiative by Mirvac and Australian House & Garden magazine, the aim was to build a landmark family home in a master-planned community at Camden in Sydney's south-west. A nationwide competition called for a sustainable, flexible and future-proof design.

Blanchfield manages three generous bedrooms, large open living zone, a multipurpose room, double-car garage and more in a floor plan of just 230-square-metres.

Her modular prototype offers floor-plan flexibility and site/ family customisation. Rising two levels at street frontage, the rear of the house flows pavilion-like along the site, and passageway free, opening itself to the garden and sunlight. The result maximises its standard allotment to create a fine interplay between inside and out.

**PROJECT** 'My Ideal House', Camden, Sydney

ARCHITECT Madeleine Blanchfield Architects, Sydney

**PRINCIPAL GLASS COMPONENTS** Viridian LightBridge™

**TEXT, IMAGES & FILM** Peter & Jenny Hyatt

# Madeleine Blanchfield discusses the challenges and her answers in search of the great Australian dream:

#### VISION Why enter the competition?

MADELEINE BLANCHFIELD We got an email inviting architects to enter and at the eleventh hour I decided it was worth doing because it's a genre that I'm really interested in. I think project housing hasn't had a shakeup for quite a while. We do bespoke houses, so it felt like something we could potentially contribute to.

Suburbia has been somewhat neglected by architects. Was this a chance for you to offer a meaningful alternative to the standard masonry and tile box? I think so. We learned a lot by doing single houses, that can be applied to the multiple housing market. Project housing often doesn't get that level of attention from architects because it's quite expensive to have an architect working on a house. We thought if we could transfer some of our knowledge to project homes, it was worth doing.

# What are some of the qualities of this house that separate it from its neighbours?

Fundamental to our design and to all our house designs is orientation, correct sun-shading and thermal mass. The real issue with putting a design on any site, as project homes normally do, is not being able to adjust and face north with living areas that open to the sun.

#### How do you address that?

Our design is in two pieces which can be combined in different ways depending on the orientation of the site. So it's always got northerly aspect, it's always got the correct eaves, and living areas always open onto the garden.









"In order to have a lot of glass, that glass has to perform very, very well. It's only because of products like those of Viridian that we can now do a design like that in a mass produced project home."

MADELEINE BLANCHFIELD, ARCHITECT

Rising two levels at street frontage, the rear of the house flows pavilion-like along the site, and passageway free, opening itself to the garden and sunlight. The result maximises its standard allotment to create a fine interplay between inside and out."

VISION





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MADELEINE BLANCHFIELD, ARCHITECT





# So it's not simply about floor-plan flexibility but orientation?

Yes, definitely. That's something that isn't necessarily clear in this prototype with the living pavilion and bedroom pavilion. These are separate and can be pulled apart and put together in different ways depending on the site.

#### Are there plans to take it further afield and to expand upon the success of this prototype?

I certainly entered the competition in the hope that, if we won, it would be rolled out. Mirvac intends to produce the house en masse. Hopefully that modular idea will be one of the things followed through.

#### Amongst all of the qualities invested in your design it obviously had to be competitively priced and affordable. How much of a challenge was that?

The square metre budget for this house was very, very low. Really much lower than any bespoke home. It relies on being mass-produced to be affordable. We imagined that if it was mass produced on a street, you don't want all the houses to look the same so we built in window boxes, which have different plants and facades that can be put together in different ways. If you had a row of them, they're not all going to be the same. It's a bit like the classic terrace house with just enough difference so that they're personalised.

#### What was the biggest test and the most gratifying? The thing we really tried to achieve, fundamentally, was connecting living areas to the garden and a sense of openness to the street. There's a glass front door where you can see straight through. You can't see anything private but you can see there is some activity within, so it's got that street connection.

"... here you have clear glass you really don't notice – and it's high performance glass yet looks exactly the same as any other clear glass product."

MADELEINE BLANCHFIELD, ARCHITECT



#### One of the tests for architecture is that it doesn't have to be grand but it should at least feel generous.

What makes the house feel generous is the full height glass that brings in the outdoor space with eaves that read as part of the room. And that it's all very seamlessly connected to the garden. When I've been there with four people sitting in the kitchen, it feels quite intimate. But also there would have been 80 people there for the open day and it can handle it because of that easy expansion into the outdoors which becomes part of that space when it needs to.

#### Do you consider it a design that utilises glass more progressively and ambitiously than the typical project build?

There's a BASIX certificate which every new house has to meet for thermal performance. The easiest way of getting through is just to have very small windows and that's not something that I find appealing in a house. In order to have a lot of glass, that glass has to perform very, very well. It's only because of products like those of Viridian that we can now do a design like that in a mass produced project home.

What's your impression of Viridian's LightBridge<sup>™</sup> with its high light transmission and thermal performance? Products like LightBridge<sup>™</sup> are fantastic. It's very easy to do grey or green glass and have a lot of it, but here you have clear glass you really don't notice – and it's high performance glass yet looks exactly the same as any other clear glass product.





### "What makes the he is the full height gla outdoor space with part of the room. A seamlessly connec

MADELEINE BLANCHFIELD, ARCHITECT



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"The things that are important on any of our houses apply, regardless of the budget, size of the site, or the house. It's really just a sense of calm and openness and good relationships between indoors and outdoors."

MADELEINE BLANCHFIELD, ARCHITECT



# What do you take away from the project that you will apply in future?

The things that are important on any of our houses apply, regardless of the budget, size of the site, or the house. It's really just a sense of calm and openness and good relationships between indoors and outdoors. Really good planning. There's no corridors in this house. There's no wasted space and I think, in doing that, you've got more money to spend on things like full-height glass. The thing we take away is that any house deserves the same level of attention and the same sort of architectural rules.

#### Your glass balustrade staircase exemplifies material consistency and minimal material palette throughout. We followed through with the interior so that the handrails for the staircase are a frameless glass event. It looks like a folded glass sculpture on the lower level. The complexities of the planes and how that works and the simple finishes of formed concrete with the glass, and chrome patch fittings all come together into something we're quite proud of.



# What do you hope the wider market might take from this example?

I hope that it's an example of how building less house can actually be better. If you have less house, more garden, it's cheaper. It can perform much better. Just paying attention to the site is really important. Hopefully those things can be applied whether it's with this house or any other mass-produced design.

In this kind of housing estate, you are quite close to neighbours. How did that affect your design? We're pretty used to close neighbours. Even in the eastern suburbs, or on waterfront sites. The tricky thing about this is that we didn't know what the house next door was going to be so you have to fool-proof it in a way. That could have been a two-storey house, but ended up a one-story house. Ours is relying on garden and eaves being held low to focus your attention down. We definitely had to think of all potential outcomes.





### "I hope that it building less If you have le cheaper. It ca

MADELEINE BLANCHFIELD,



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ARCHITECT



PROJECT My Ideal House, Camden, Sydney

**CLIENTS** Mirvac and Australian House & Garden

ARCHITECT Madeleine Blanchfield Architects, Sydney

**BUILDER** Mirvac

GLASS SUPPLIER Viridian

**PRINCIPAL GLASS COMPONENTS** Viridian LightBridge™

**sıze** \$230 sqm



One of the difficulties of suburban development is to make each house appear the prototype. Economies of production demand the more stereotyped. How do you reconcile that?

The house here absolutely needs to be able to be repeated. There's just not the budget to have an architect working on it for two years, for instance. We tried to almost treat the thing as a frame with the front facade, so windows could be plugged on in different ways to give it individuality.

# After your experience with some glamorous and celebrity housing, can this sort of project be exciting in another way?

I found it really exciting to go to the house when it was finished and see people using it. I think regardless of how much a house costs, that feeling you get in the end of just a really healthy, calm space is the same, regardless of what the finishes are, or where it is.



#### **AUSTRALIA**

#### **NEW ZEALAND**

VICTORIA		
Hamilton	(03) 5571 1233	
Melbourne	(03) 9562 9562	
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Morwell	(03) 5120 3600	
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Albury	(02) 6021 4333	
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SUBMISSIONS VISION welcomes project submissions by our editorial team. Please send ideas and projects to: <u>viridian@csr.com.au</u>

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