





OVERVIEW

- Ian Maclean,

Architects

Calm, happy children learning in bright spaces lit by natural light; this dream has become a reality for New Zealand's newest primary school.

The chance to build a new school doesn't happen very often in New Zealand. When it does, architects and educators have the opportunity to embrace the latest thinking about learning environments. Of all the features they want for a new school, one thing shines through: natural light, and lots of it.

Lemonwood Grove School was a project made in heaven for those involved. Not just a brand new primary school, but a brand new school in Canterbury - a region that's suffered the trauma of two major earthquakes.

The school is located in Rolleston on the outskirts of Christchurch. Since the quakes, Rolleston has been growing exponentially. The demographic is youthful; you see people pushing prams everywhere. For many families moving to Rolleston has been a fresh start; this feeling is at the heart of Lemonwood Grove School's design.

Architects for the project, Stephenson & Turner, aimed for open, versatile learning areas that are primarily lit by VELUX skylights. The result is a thoughtfully crafted educational environment that sets a new standard for school design in New

Zealand. The first thing everyone notices about the internal spaces is the natural light. This observation always comes with a smile.

In the words of one Lemonwood Grove parent: "The learning areas at Lemonwood Grove are light years from the dark, dingy classrooms I experienced as a child. I love that my kids are learning in open spaces that are naturally bright."

ARCHITECTS

IAN MACLEAN, STEPHENSON & TURNER

"We decided to go with VELUX skylights because they are the most suitable products for this situation. When you look at the footprint of the learning spaces, they're quite deep.

If you didn't have natural light coming in, the middle of these spaces would be dark and unwelcoming. The skylights do a great job of brightening those central spaces.

"While we could have designed the skylights to produce a straight shaft of light, what we decided to do was flare the bottom of the ceilings.

This helps the light to dissipate more, rather than beam straight down. It's easier on the eyes for both children and teachers.

"The building has 40 VELUX skylights in total. They all have auto blinds, a very useful feature that allows teachers to dim the light for certain situations. This type of skylight is easy to install and the flashings are simple. That sort of thing is important in an education situation.

"I don't believe there's any other solution that would have worked as well as VELUX skylights. I've worked on other school projects similar to Lemonwood Grove School and have used VELUX products in those as well, but this is the most skylights we've ever specified for a school. The outcome is the best natural lighting we've ever seen in a school."









FIXED SKYLIGHT

The VELUX FCM fixed skylight was selected to provide Lemonwood Grove School with natural light for learning spaces.

This skylight can be used to create daylighting solutions for a wide variety of building types: narrow corridors, internal courts, studios, large circulation spaces and much more. Prefabricated custom flashings ensure a perfect fit and 100% water tightness.

VELUX FCM skylights are double glazed and have a Low-E3 coating, to minimise heat gain and loss. Blinds can be fitted to allow room darkening when it's required.





LEARNING SPACES

THE DAY-TO-DAY EXPERIENCE

In a survey* commissioned by the Ministry of Education, quality of light was one of the top three factors for classroom design. Students rated being able to clearly see the board as important as being able to hear the teacher easily.

Both students and teachers reported that they prefer natural lighting over artificial; they also actively dislike fluorescent lighting because of glare and flicker.

At Lemonwood Grove School, everyday learning and teaching is made easier and more enjoyable by the natural light provided by VELUX skylights. Sean Bailey, Principal at Lemonwood Grove explains:

"Natural light has a huge impact on people's ability to function successfully in society – not only children, but also adults. The design and construction of this school is around maximising the amount of natural light that can be filtered through to our learning spaces

"My teaching team say the classrooms feel light, calm and welcoming, students settle down to work quickly and there are fewer student absences. Visual tasks are easier for the kids, because they can see what they're working on and colours are more accurate. From a school administration point of view, the skylights are helping to keep our energy costs down - that's always a good thing when you're running a tight budget."

* https://www.education.govt.nz/assets/Documents/Primary-Secondary/Property/School-property-design/Flexible-learning-spaces/BranzLightingDesignGuide.pdf

VELUX is thrilled to be helping new schools create learning spaces that support optimum teaching and learning performance, as well as improved health and wellbeing. Our skylights can also be retro-fitted to existing school buildings, to bring learning environments up to date.

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VELUX®

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> – Ian Maclean, Stephenson & Turner, Architects

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Visit **velux.co.nz** to view a video case study on this project.