

Photos: Simon Devitt

LOCAL HERO

Now decked out in LEDs, the once-reserved Auckland War Memorial Museum is creating quite a stir

BY ELIZABETH HALL

In October 2009, crowds in Auckland gathered to witness an unusual sight coming from a heavily wooded area just miles from downtown. For a moment, traffic slowed to a halt as people stopped to stare, cheer and snap pictures of the scene. The cause of the commotion? One of the city's greatest icons, the Auckland War Memorial Museum, had been transformed by brilliant color-changing LED light.

More than just a war monument, the museum is dedicated to sharing the story of New Zealand's cultural past,

including the history of the Maori people, as well as memorializing the country's soldiers. As such, it has become a symbol of respect and unity among New Zealanders. Its iconic status is also due to its prominent location on a hill in Auckland's 75-hectare public park, The Domain, where it is visible from multiple vantage points in the city.

For the museum's 80th birthday, its well-recognized neo-classical façade and foyer were made over by Canadian lighting design firm Lightemotion. While the client wished to change the building's existing lighting—which

did little to enhance its architecture—it wanted to ensure that the new lighting would be tasteful, sustainable and in keeping with the cultures the museum represents. “It is a war memorial, but it’s also a natural and cultural history museum and it caters to the Maori community. So, it needed something that would fit with all those characters, cultural backgrounds and different themes,” says François Roupinian, principal, Lightemotion, Montreal. Furthermore, the building’s designation as a heritage site ruled out invasive upgrades. Roupinian chose LEDs—white for the Grand Foyer and color-changing for the façade—not only to meet the sustainability objective, but also for their small size and controllability.

GRAND ENTRANCE

The size of fixtures was a major concern in the three-story Grand Foyer, where heritage codes restricted Roupinian from running conduit through the plaster ceiling. “There are only two or three circuits in the whole ceiling and we didn’t have the option of adding power, so we needed a small unit source that wouldn’t upstage the décor,” says Roupinian. “The goal was to have indirect light on the ceiling, directional light to illuminate artifacts in display cases and light to graze the columns.” To accomplish this, Roupinian added a new DMX track system with improved controls and more efficient lamping.

Previously, the existing track had been fitted with MR16s, which created “a lot of spill and glare everywhere,” says Roupinian, and indirect fluorescents had been used to light the middle of foyer. “We changed everything,” he notes. “The new design uses light with anti-glare for a much softer look.” Roupinian specified new DMX track fitted with white 36-W eW Blast LED luminaires (Philips ColorKinetics) to graze the columns, ceramic metal halide luminaires (Selecon) for downlighting and accenting, and 20-W CMH track fixtures (iGuzzini Technica and Selecon) to light the display cases. Integrated on top of the module are dimmable indirect fluorescents that uplight the ceiling. Both the track and fluorescent fixtures are linked to the same power source, eliminating the need for extra wiring.

In the wings of the foyer, Roupinian mixed white and color-changing LEDs to wash the walls and CMH accent lights (iGuzzini) to downlight the floors. The

combination of sources allows for “a very dynamic scheme,” explains Roupinian. “The lighting evolves from day to evening. During the day, there is a lot of daylight from the glass skylight in the ceiling, so the lights are dimmed down. If they have a party at night, the LEDs in the wings give a soft hue of light.”

FACELIFT

Like the foyer, the façade lighting is mostly made up of LEDs, though here they are color-changing and were selected largely to reduce energy. “Ethically, we couldn’t present anything that was not sustainable,” says Roupinian. “The museum represents the preservation of great cultures, history and science. To honor this, we really had to bring something that conserved energy. The system we ended up with uses only 1 percent of the building’s total power consumption; that’s less than a small gallery.” The LED fixtures (Philips ColorKinetics) also pack a lot of punch into a little package, which helped Roupinian achieve the look he wanted without having unsightly fixtures visible from the parapets.

For both the front and back entrances, Roupinian used one type of LED luminaire to illuminate the parapet from top to bottom and another type to uplight the columns around the entire building perimeter. To integrate the uplights with the architecture, they were installed in a molded concrete base that Roupinian designed in conjunction with the heritage architect. In addition, CMH fixtures from Martin detail the stones on the front façade and the side fountain area. Illuminating the main colonnade of the building are 150-W in-ground luminaires. For frontal illumination, 150-W exterior wash lights are mounted to the poles of the existing area lights with custom brackets designed by Roupinian and the architect. The wash lights “allow the building to be read from afar,” he explains.

Though the RGB LEDs have near-endless color-changing capabilities, Roupinian refrained from turning the historic structure into a Vegas marquee. “The museum didn’t want the building to look like a colored lollipop, but it wanted the possibility for variations. So, we created three schemes that run most nights,” he explains. Starting at 5:00 p.m. and ending at midnight, the “classical” scheme consists of amber-colored light.

Fixture size was an issue in the Grand Foyer, where heritage codes prevented adding wiring to the ceiling. A standard MR16 track system was replaced by DMX track fitted with LED and CMH fixtures. The new lighting reduces glare and creates a soft glow on architectural elements like the columns (inset).




PROJECT



Next, the color transitions to lavender for the “moonlight” look, which runs until 3:00 a.m. The color palette for this scheme is based on the Maori colors; “it’s close to the color of water,” says Roupinian. “There is something magical about this look.” Last is the security lighting—a vibrant blue—that runs until 6:00 a.m. The team also programmed a variety of additional schemes for special events and holidays.

With a restrained, but powerful palette, the schemes have maintained the historic integrity of the building, yet still have generated a buzz among the locals. Roupinian remembers one specific night when he and his team performed a chase during testing. “As we were changing colors, we noticed that there were kids parking their cars to look at the colors. There was a line of cars on the hills from people who stopped to watch. They were gathering around the building to take pictures and videos,” he recalls. Afterwards, the team was stopped on the street by people who shared their favorite colors and complimented them on the lighting. “One woman even told me how she and her husband had

moved dinner onto their balcony so they could drink wine and watch the colors change,” he adds.

Much like the museum, itself, the lighting seems to have a unifying effect. “At the opening, people from all generations showed up with their kids, uncles, aunts and grandparents. After a poem was read by a Maori woman we had a light show set to music. We created 10 queues, but, in the end, they wanted more. I was truly surprised. I’ve seen people get excited about light, but I’ve never anything like the New Zealanders.”

METRICS THAT MATTER

Auckland War Memorial Museum

Watts per sq m: 0.6

Lamp Types: Grand Foyer = 3; façade = 2

Fixture Types: Grand Foyer = 8; façade = 5



About the Designer: François Roupinian is the chief designer and president of Lightemotion. After interning at the Banff Centre for the Arts, Mr. Roupinian began his career in theater and stage lighting. In 2002, Mr. Roupinian founded Lightemotion, a Montreal-based design firm with a global reach.