

# A GIANT LEAP FORWARD IN STEP NOSING

Ecoglo International's recently released F14-2711 Step Nosing combines anti-slip (also referred to as non-slip) tread with high-visibility photoluminescent strip inserts, providing superior stairway safety in large civic buildings and stadia.

When the emergency alarm sounds and the lights go out, nothing beats the reliability of photoluminescent 'glow in the dark' safety products to help people find their way out of a building as safely as possible.

Ecoglo International, which has more than 20 years' experience designing and manufacturing premium photoluminescent safety products for commercial, sporting, educational and industrial facilities, has a long history of innovation based on genuine market need, world-class research and development aligned to global standards and regulations, and a commitment to high-quality fabrication using its own manufacturing facilities in New Zealand.

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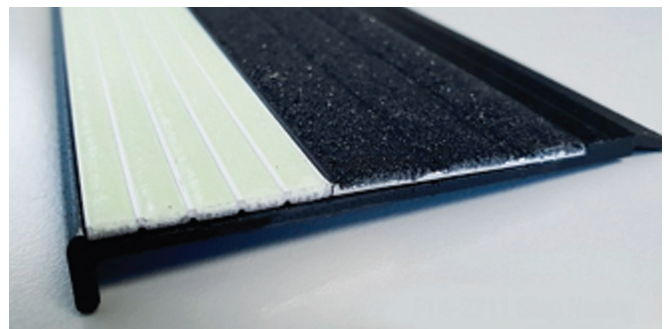
Ecoglo's latest contribution to the science of safe building access and egress is the F14-2711 Step Nosing.

The term Step Nosing refers to strip-style products affixed to the nose of steps to delineate edges and help provide a visual route out of buildings. This class of product is fundamental to safe people movement – in day-to-day applications as well as emergencies – in buildings throughout the world. The F14-2711 Step Nosing features a range of complementary technologies to help pedestrians negotiate stairs reliably, even in complete darkness. The main component is a photoluminescent 'glow in the dark' strip that can be charged by either daylight or artificial lighting. When fully charged, each strip remains visible in complete darkness for up to 12 hours. By contrast, electrically powered way-finding lighting systems or markers, which depend on back-up batteries or generators during a power outage, are useless if these support systems fail.

As an indoor/outdoor product, F14-2711 Step Nosing can be affixed permanently and easily to steps made from concrete, timber, steel, vinyl or steel mesh. It can also be used over carpeting of various gauges.

Each nosing has an extra-wide horizontal contact surface (74.8mm), with a lower lip of 9.7mm curling vertically over the step riser. Lengths are available in 100mm increments from 800mm–1500mm, and orders for custom sizes are welcome.

What makes the F14-2711 so special is the use of high-quality polymer technologies on the primary horizontal surface, comprising a 26mm high-visibility, anti-slip photoluminescent strip abutting a 37mm anti-slip strip insert. The entire Step Nosing assembly is manufactured in New Zealand using a patented thermoset process (High Temperature Curing), during which the photoluminescent polymer is baked at high temperatures onto an aluminium substrate. This process delivers optimal product strength and incredibly consistent 'glow in the dark' performance for many years, even in the harshest conditions.



F14-2711 Step Nosing

## Bankwest Stadium

Like so many Ecoglo products, the F14-2711 Step Nosing was developed to satisfy a specific market need.

When Dr Hamish MacLennan, Assoc. Prof. Enabling Built Environments Program, University of New South Wales, was designing the safe movement system for the new award-winning Bankwest Stadium, Sydney, he realised that a composite non-slip/photoluminescent step nosing would be an efficient inclusion in his overall design. Dr MacLennan, an international expert in the design of safe movement systems for commercial-scale buildings, has a particular interest in the practicalities of safety and mobility. He is a longstanding specifier of Ecoglo's photoluminescent products in projects around the world, and a frequent collaborator with the Ecoglo team in the development of cutting-edge emergency evacuation products.

"I needed [a photoluminescent strip] that was nearly 30mm wide that would satisfy the Australian Standard AS 1428, which relates to safe access into buildings for people with disabilities," Dr MacLennan explains. "If you make it any narrower it doesn't define the step and give you enough luminance. We backed that up with a non-slip strip."

According to Dr MacLennan, the use of a matt black finish over the aluminium carrier and non-slip surface creates a vital

luminance contrast between the photoluminescent strip and its surrounds; contrast is always an important ingredient in the effectiveness of high-visibility Step Nosings and markers.

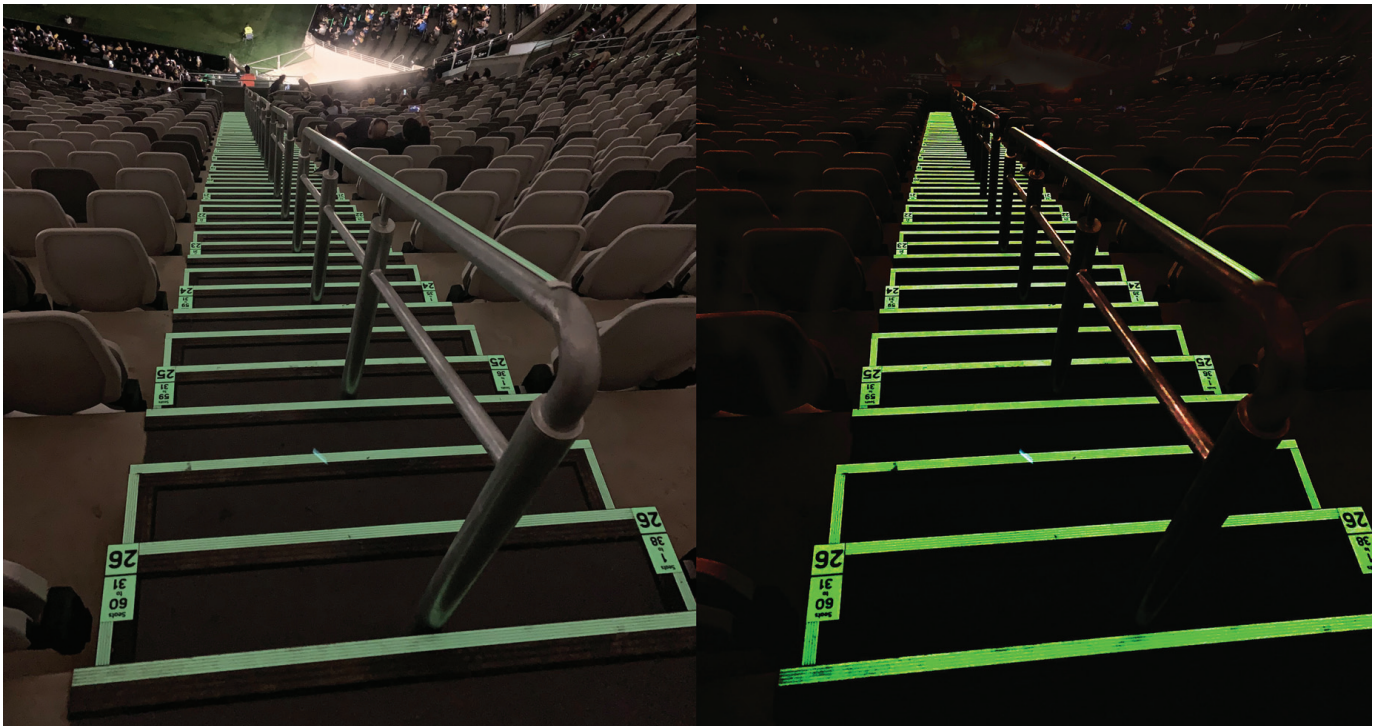
"The self-illuminating quality of photoluminescent materials overcomes the 'shadow effect' often associated with conventional step marking systems involving overhead lighting." Dr. Hamish MacLennan, international expert in the design of safe egress systems.

Furthermore, he says the self-illuminating quality of photoluminescent materials overcomes the 'shadow effect' often associated with conventional step marking systems involving overhead lighting. "When you only have lighting to identify steps, you won't see much because the light may be reflected off people's heads and shoulders," he says. "With a photoluminescent material all you have to do is look down. You will always see your feet because when people walk in close proximity to each other there is always a distance of 300mm–500mm between them because that's their comfort zone." The main objective of any safety solution involving steps, Dr

MacLennan says, is to define each step properly. "As long as we can define a clear set of steps, then we can create a system that has a scientific basis for a performance solution." A clearly defined step, he adds, should highlight the full tread surface unambiguously: "What you need to do is put the photoluminescent strip along the front and also return it around the sides, so it's as if you are defining the step with a glowing green line, and you know that inside that glowing green line is the tread – it's like virtual reality."

The F14-2711 Step Nosing is designed to be used in conjunction with a range of complementary photoluminescent products to create a holistic safety solution. Dr MacLennan's specifications for Bankwest Stadium, for instance, include a range of curved photoluminescent handrail strips and markers. "Everything goes together to define a safe descent system," he says.

All photoluminescent products used in Bankwest Stadium are subject to a management regime requiring regular inspections, cleaning and testing.



Ecoglo's F14-2711 Step Nosing on steps at Bankwest Stadium, Sydney

Ecoglo's Executive Director, Mike Dimond, says he and his team were delighted to work with Dr MacLennan in the development of the F14-2711 Step Nosing.

"We ended up installing 8200m of F14-2711 in Bankwest Stadium, and this new nosing has now become part of our core range of more than 100 photoluminescent step nosing products," Dimond says.

Since its installation in Bankwest Stadium in 2019, F14-2711 Step Nosing has been specified for inclusion in other major projects in Australia and Asia.



Dr Hamish MacLennan, Assoc. Prof. Enabling Built Environments Program, University of New South Wales

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Ecoglo International PL products are available worldwide and meet or exceed all relevant international building and compliance code requirements.

For more information visit [ecoglo.com.au](http://ecoglo.com.au) in Australia or [ecoglo.co.nz](http://ecoglo.co.nz) in New Zealand.

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