



LEADSUN
EST. 2005

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IN PARTNERSHIP WITH



CASE STUDY

CLIENT

City of Melbourne

PROJECT

Capital City Trail
Puck Lighting

TRADITIONAL CUSTODIANS

Wurundjeri Woi-wurrung and
Bunurong / Boon Wurrung peoples

Solar path lights make the Capital City Trail safer at night

A dangerous section of the popular Capital City Trail is now safer for cyclists and pedestrians at night thanks to an innovative and unobtrusive custom outdoor pathway lighting solution from Leadsun. The project integrates puck LED lighting fixtures in the handrails of a footbridge and powers them with a remotely located solar panel and energy storage system positioned away from nearby trees to avoid overshadowing.



A strong case for pathway lighting

Half a kilometre south of Royal Park train station, the Capital City Trail drops steeply to meet a footbridge traversing a creek. This section of the trail is covered by a canopy of thick eucalyptus trees making it particularly dark at night and hazardous for descending cyclists. Pedestrians walking the other way have limited visibility of oncoming cyclists and have reported feeling unsafe generally because of the darkness.

To increase safety, reduce collisions, and encourage active transport all year round, the City of Melbourne identified the need for outdoor pathway lighting to illuminate the bridge. Royal Park is an ecologically sensitive area, so a sustainable, dark-sky-compliant lighting solution was a high priority.



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The need for a custom pathway lighting solution

Located deep within the park, the site has no nearby mains electricity. Connecting to the electricity grid would have been prohibitively expensive and disruptive to wildlife and commuters.

A thick canopy of trees shading the site meant that conventional solar path lights with an integrated solar panel and LED light would not work.

The Capital City Trail is used by more than 1 million people annually. With so much traffic and no suitable detour available, closing this section of the path during the upgrade was not an option.

The Leadsun solar path lights solution

The City of Melbourne engaged Leadsun to install a custom solution using solar lighting so no connection to the electricity grid was needed. A Remote Energy Storage System (RESS) was used so the solar engine (including solar panel and onboard battery) could be located away from trees and overshadowing. To power the pathway lights, an extra-low 12 volt DC cable connected the solar engine to the bridge via a shallow trench.

For a discrete and unobtrusive design, the City of Melbourne opted for puck lighting fixtures. The compact circular LEDs were integrated into one side of the bridge handrail and positioned to shine directly onto the adjacent pathway.

With Leadsun's EZYTilt lowerable pole and careful planning, the entire installation took just two days including welding on-site. The pathway remained open to the public throughout.

This dangerous section of the Capital City Trail in Royal Park is now illuminated with a custom designed outdoor pathway lighting solution benefiting cyclists and pedestrians. The upgrade addresses real and perceived safety concerns, improving active transport infrastructure and attracting commuters away from dangerous roads during the evenings.

Leadsun Products Used

P Category lighting compliance	AS1158.3.1.202 PP5
Solar module series	AE6
Solar size	200W
LED output programming	1.5W dusk to dawn
Pole footing type	Concrete, Ragbolt
Pole type	EZYTilt - lowerable

We acknowledge the Traditional Custodians of the land on which this project was undertaken, the Wurundjeri Woi-wurrung and Bunurong / Boon Wurrung peoples of the Kulin. We recognise their continuing connection to land, waters and culture, and we pay our respects to Elders past, present and emerging.

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