

BURWOOD BRICKWORKS

**A BRIGHT
PATH AHEAD**



LOCATION

BURWOOD EAST, VIC

END USER

LOCAL COMMUNITY

PATHWAYS & CONNECTING ELEMENTS

ELECTRICAL CONTRACTOR

HAYESPOWER ELECTRICS

ELECTRICAL CONSULTANT

WSP

PRIVATE ROADWAY

ELECTRICAL CONSULTANT

ADP CONSULTING

The Brickworks

Burwood Brickworks is a masterplanned community in Melbourne's Eastern suburbs built with sustainability in mind. The precinct covers approximately 18 hectares and includes housing, recreational amenities, retail, entertainment and hospitality spaces and even a rooftop urban farm.

Advanced Lighting Technologies supplied exterior lighting solutions from Cree Lighting for a variety of area lighting applications at Burwood Brickworks. The **Cree Lighting XSPM Series** was installed along the shared path/bike network that winds its way throughout the estate, while the **Cree Lighting OSQ Series** was installed to illuminate a private roadway servicing the shopping centre.

CHALLENGES

- Achieve compliance with relevant Australian Standards
- Integrate auto-dimming during quieter periods
- Optimise lighting design to use minimal poles

SOLUTIONS

- Cree Lighting XSPM Series
- Cree Lighting OSQ Series

RESULTS

- Comfortable, uniform illumination
- Enhanced feeling of security and safety
- Minimal obtrusive light on residences
- Compliant with relevant Australian Standards



Aerial photography courtesy of Nearmap



● PATHWAYS & CONNECTING ELEMENTS

● PRIVATE ROADWAY



The Development

Burwood Brickworks offers residents a healthy, convenient lifestyle that helps reduce their environmental footprint. The precinct was designed to achieve numerous sustainable certifications, including being rated a 6-Star Green Star Community by the Green Building Council of Australia.

The onsite retail precinct's environmentally friendly credentials include the use of renewable electricity, recycled water, natural ventilation, repurposed materials and prolific use of plants and trees, both indoors and out. In fact, the shopping centre at Burwood Brickworks was also the first retail centre to attempt Living Building Challenge (LBC) Petal certification, which was achieved in April 2021.

In addition to hospitality, entertainment, retail and housing, Burwood Brickworks aims to serve as a community hub, hosting events and activities for residents.

Perhaps the most unique feature of Burwood Brickworks is its rooftop urban farm, which is fast becoming a thriving landscape that improves social connection. Food that is grown on the farm is distributed to communities and projects throughout Melbourne.

Requirements & Challenges

Interconnectivity is at the heart of Burwood Brickworks' design, with a main pedestrian thoroughfare known as **The Link** connecting the retail and entertainment precincts with residential and recreational areas, including **The Village Green** - an expansive park and wetlands at the heart of the development.

Advanced Lighting Technologies were engaged by **WSP** to design and supply a lighting solution to illuminate both The Link and the shared cycle/path that surrounds and leads to The Village Green.

Any proposed lighting solution had to demonstrate compliance with the relevant Australian Standards for both public space lighting (AS/NZS 1158.3.1) and obtrusive light (AS/NZS 4282).

Completed during an earlier stage of construction, Advanced Lighting Technologies were also commissioned by **ADP Consulting** to design and supply a lighting solution for private roadway that leads into the shopping centre car park.

When designing lighting for car park roadways, certain key factors must be carefully considered. Ensuring adequate brightness and uniformity across the entire area is paramount for pedestrian and vehicle safety - following the recommendations in AS/NZS 1158.3.1 can help to achieve this.

With sustainability at the forefront of the entire development, any proposed lighting solution had to offer a long lifetime while minimising energy consumption both directly and indirectly, utilising means such as intelligent design to reduce the required number of poles and luminaires. The rigours of the modern urban environment also meant resistance to damage and vandalism had to be carefully considered.

The Solution

Advanced Lighting Technologies offer luminaires from some of the world's leading lighting manufacturers, including LED innovator Cree Lighting. Our range of specification-grade luminaires have been carefully chosen to meet the most demanding requirements of lighting designers, engineers, contractors and end users.



CREE LIGHTING
OSQ Series
AREA & FLOOD

The Cree Lighting OSQ Series Area & Flood Light blends extreme optical control, advanced thermal management and modern, clean aesthetics. Built to last, the housing consists of rugged cast aluminium with an integral, weather tight driver compartment. Versatile mounting configurations offer simple installation. Its slim, low-profile design minimizes wind load requirements and blends seamlessly into its surrounds, providing even, quality illumination.

Thanks to Cree Lighting's advanced optical control, uniform illumination is directed only where needed, offering pedestrians and motorists a safer and comfortably lit environment.

Benefits

- 1 Suitable upgrade for HID applications
- 2 Slim, low-profile design minimizes wind load requirements
- 3 Standard 10-year limited warranty

LUMENS	8,500L - 31,000L
WATTAGE	52W - 208W*
CCT	3000K 4000K 5700K
CRI	70 CRI 80 CRI @ 3000K
RATINGS	IP66 IK08
OPTIONS	NEMA
WARRANTY	10 YEARS
COLOURS	BK SV
HIGHLIGHT	NANOOPTIC® PRECISION DELIVERY

**Select variants*

NOTE:
The Cree Lighting OSQ Series boasts a well-earned reputation but this particular iteration is now closer to the end of its life cycle than the beginning. Advanced Lighting Technologies will continue to offer limited quantities for project use until our supplies are exhausted. We recommend considering modern alternatives where possible - contact us for more information.

Advanced Lighting Technologies are the only authorised distributor of Cree Lighting products in Australia.



CREE LIGHTING
XSPM Series
STREET & AREA

The Cree Lighting XSPM Street & Area Light delivers uniform illumination exactly where it's needed thanks to integrated NanoOptic® technology. Generating incredible efficiency without sacrificing application performance, the XSPM Series offers far superior optical control than traditional streetlights and thanks to flexible mounting options and simple installation, is perfect for both retrofit and new construction. A standard 10-year warranty offers peace of mind.

In addition to manual dimming variants (DALI, 1-10V), the XSPM Series is available with a number of programmable control options to lower lumen output during periods of inactivity, reducing energy consumption even further. NEMA and Zhaga-ready options are also available.

LUMENS	1,900L - 7,000L
WATTAGE	16W - 58W*
CCT	3000K 4000K 5700K
CRI	70 CRI
RATINGS	IP66 IK08
OPTIONS	SMART FUNCTIONS DALI
WARRANTY	10 YEARS
COLOURS	BK SV
HIGHLIGHT	AEMO APPROVED*

**Select variants*

Benefits

- 1 Elite optical control
- 2 Traditional cobra head appearance
- 3 Multiple control options for flexibility

Results

Recreation and leisure facilities are vital to any local community. They assist in promoting a healthy lifestyle and can contribute to social inclusiveness, engagement and interaction so it's important these assets are well planned and thought out.

At Burwood Brickworks, the **Cree Lighting XSPM Street & Area Light** provides soft, warm illumination to create a welcoming and comfortably lit environment around both The Village Green and The Link, extending the usability of both until well after dark, providing local residents greater access to the amenities offered as part of their community.

Thanks to strategic luminaire placement and selection, the shared cycle and pathway lighting at Burwood Brickworks is both functional and aesthetically pleasing. The use of warm correlated colour temperatures (3000K) ensures a pleasant experience for users while creating a sense of safety that doesn't overwhelm or dazzle with glare.

The XSPM model supplied on the project also feature two-step drivers, programmed to reduce the amount of light during quieter periods using the LineSwitch control method. Using this functionality created two distinct light levels - high and low. When combined with Cree Lighting's advanced optical control, these dimming capabilities ensured compliance with obtrusive light requirements recommended by the relevant Standard (AS/NZS 4282).

Where applicable, the sections of pathway and connecting elements illuminated by Advanced Lighting Technologies at Burwood Brickworks were designed to comply with the light technical parameters recommended by the following Australian Standards:

**AS/NZS 1158.3.1:2020
Lighting for Roads & Public Spaces**

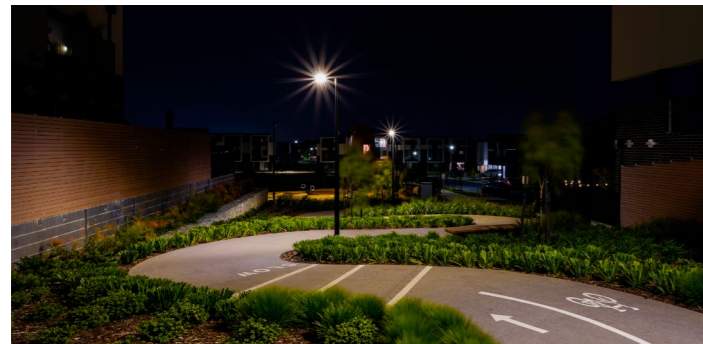
- Subcategory PP4 & PP5 (Path & Cycle Ways)
- Subcategory PE2 & PE3 (Connecting Elements)
- Table 3.8/3.9 - Discomfort Glare Class 2 (DG2) Compliance (< 6m Mounting Height)

**AS/NZS 4282:2019
Control of the Obtrusive Effects of Outdoor Lighting**

- Table 3.3 (Zone A3 - Medium District Brightness) (Curfew Compliance In Low Mode / Non-Curfew In High Mode)



Exterior car park roadway lighting should focus primarily on security and safety; other vehicles and pedestrians should be visible to drivers at all times. The car park at Burwood Brickworks Shopping Centre can get quite busy during peak times, so ensuring the area was adequately lit was of paramount importance.



Using the **Cree Lighting OSQ Series Area & Flood Light** has created a safely lit environment through excellent uniformity ratios and controlled high-angled brightness. An optimised lighting design that used minimal fittings and poles was required to ensure the most efficient possible use of the space, while reducing resources and installation costs.

The private roadway illuminated by Advanced Lighting Technologies at Burwood Brickworks was designed to comply with the light technical parameters recommended by the following Australian Standards:

**AS/NZS 1158.3.1:2005
Lighting for Roads & Public Spaces**

- Subcategory P2 - Collector Roads Or Non-Arterial Roads / Pedestrian or Cycle Orientated Pathway

Both luminaires provided at Burwood Brickworks were designed to withstand the rigours of the urban environment. The XSPM Series and OSQ Series both feature high IK ratings, as well as Cree Lighting's exclusive DeltaGuard paint finish that provides excellent resistance to corrosion, ultraviolet degradation and abrasion.

Both fixtures are also assembled without the use of glues - making them completely dismountable and recyclable - a nod to the environmentally friendly nature of Burwood Brickworks.

With elements of sustainability, and the combination of clever lighting design and strategic luminaire selection, residents and visitors to Burwood Brickworks will be enjoying quality illumination for years to come.



Advanced Lighting Technologies are specialists in architectural, commercial and industrial lighting. **Whatever the application, whatever the budget - we'll have a solution that fits your needs.**



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