

# LIGHTS ON, GAME ON

CASE STUDY



BAYSIDE COMMUNITY  
SPORTS CENTRE

# Lights On, Game On.

The Bayside Community Sports Centre in Sandringham, Victoria is a state-of-the-art sporting facility developed through a collaboration across all levels of government. Advanced Lighting Technologies supplied the flexible, modular Arianna Petrarca LED Floodlight as part of the development.



LOCATION

SANDRINGHAM, VIC

END USER

BAYSIDE DISTRICT NETBALL ASSOCIATION & SANDRINGHAM COLLEGE

ELECTRICAL CONTRACTOR

POSITIVENERGY ELECTRICAL

ELECTRICAL CONSULTANT

CORTESE CONSULTANTS



## The Facility

Located at the Holloway Road campus of Sandringham College, the Bayside Community Sports Centre (BCSC) officially opened in 2024. The new facility represents Bayside City Council's largest investment in community sport to date, with over \$18 million spent on the project, supported by a \$4.7 million Federal Government grant and built in collaboration with the Victorian School Building Authority (VSBA). The Bayside District Netball Association (BDNA) operates the facility, which serves 12 local clubs.

Designed to accommodate the growing demand for netball and cricket, the centre features two new indoor netball courts and nine outdoor courts. It also includes a refurbished sports ground suitable for cricket and Australian Football, along with amenities such as change rooms, umpire facilities, first aid rooms and administrative offices. Landscaping and five-star energy initiatives such as solar power and rainwater retention systems were also included.

# Requirements & Challenges

Netball is a fast-paced and physically demanding sport, involving rapid movement of the ball and participants up and down the court. To ensure optimal performance and safety, it's essential to offer clear, uniform visibility from all angles for players, umpires, and spectators. High quality lighting can help to achieve this, allowing players to quickly judge the ball's flight path and speed, enabling sharp reactions and precise decision-making. It also enhances the overall spectator experience and supports fair and consistent officiating.

Adhering to the guidelines recommended by the relevant Australian Standard for Sports Lighting (AS 2560.2:2021) is the best way to meet these requirements.

Advanced Lighting Technologies were engaged by Cortese Consultants to provide a lighting solution at Bayside Community Sports Centre that did just that.

The site presented several unique challenges that needed to be addressed during the design phase. Firstly, in order to maximise the number of new courts, a non-symmetrical layout was used, resulting in a 2-2-1-2 + 1 configuration of open-air courts.

Secondly, the proximity of residential buildings at both the southern and northern edges of the development meant any spill light had to be absolutely minimised, with compliance to AS/NZS 4282:2019 deemed essential.



The current **Australian Standard** recommends the following average maintained lux levels for each level of play:

**100 LUX** | Recreation or Training & Low-Level Local Competition

**200 LUX** | Mid-Level Local & Regional Competition + High Level Training

**500 LUX** | International & National Competition



# Solution

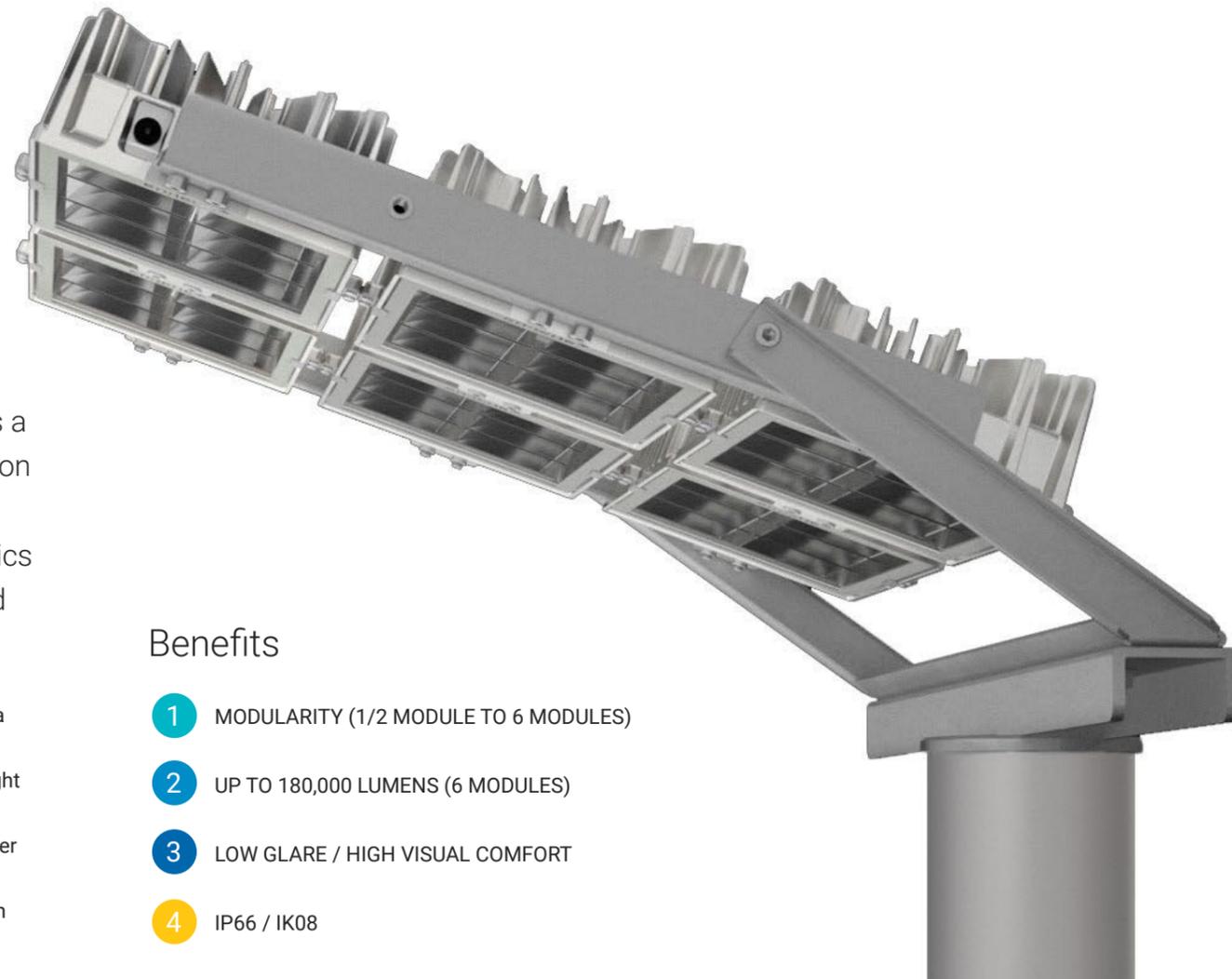
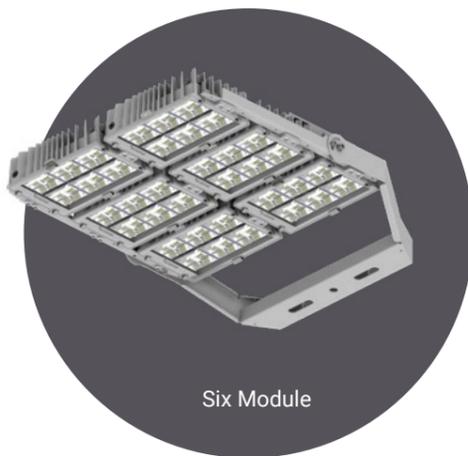
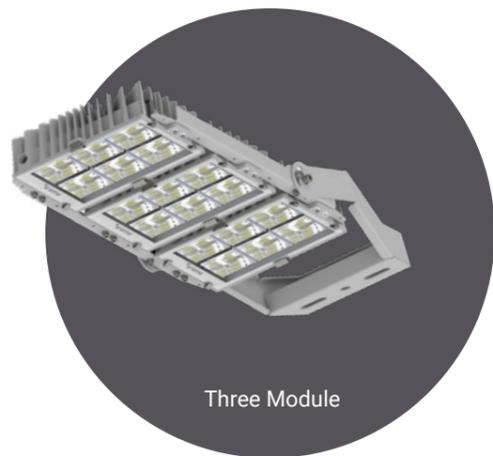
## Petrarca

SPORTS FLOODLIGHT

The **Arianna Petrarca LED Floodlight** is a flexible and modular area lighting solution capable of delivering up to 180,000 lumens through patented reflection optics that offer high efficiency, uniformity and visual comfort.

Although perfectly suited for use in any large, open-area lighting application, it's on the sporting field that the Petrarca really shines - generating comfortable, even light distribution with minimal glare to provide an enjoyable experience for both participants and spectators. Whether it's a netball court or a larger sports field, the Arianna Petrarca offers a cost-effective, energy-efficient modern LED sports lighting solution.

While the model of the Arianna Petrarca supplied at Bayside Community Sports Centre remains available, it has since been superseded and may no longer be accessible in all variants. We suggest considering the new and improved **Arianna Petrarca 3.0** for your sports and area lighting needs.



### Benefits

- 1 MODULARITY (1/2 MODULE TO 6 MODULES)
- 2 UP TO 180,000 LUMENS (6 MODULES)
- 3 LOW GLARE / HIGH VISUAL COMFORT
- 4 IP66 / IK08

|           |  |
|-----------|--|
| LUMENS    | 10,000L - 181,000L   |
| WATTAGE   | 70W - 1390W  |
| CCT       | 3000K   4000K   5700K                                      |
| CRI       | 70 CRI   80 CRI   90 CRI                                   |
| RATINGS   | IP66   IK08  |
| OPTICS    | NARROW   WIDE   ASYMMETRIC   FLOOD                         |
| OPTIONS   | NEMA   DALI  |
| WARRANTY  | 5 YEARS  |
| TOLERANCE | -30° TO +50°C  |
| COLOURS   | <input checked="" type="radio"/> N <input type="radio"/> G |
| HIGHLIGHT | REMOTE CONTROL GEAR OPTIONAL                               |

## Arianna's Reflection Expertise

Arianna's internationally recognised total reflection patent is a technological innovation that borrows from astronomy. The system uses a reflector inside the luminaire to collect rays of light and direct them evenly onto the ground.

The LEDs are concealed from view, resulting in low glare and improved energy efficiency. Arianna have integrated the principles of total reflection in their innovative luminaires, providing targeted solutions for different lighting needs.



## Petrarca's Innovative Technology

The DEFLECTIVE reflection system found in the Petrarca captures and blends the emitted light through the initial optical assembly, then uses a second assembly to cast it uniformly. This ensures the Petrarca delivers high visual comfort and uniformity, without creating dark spots or glare.



## Results

Netball is the most popular female team sport across Australia and participation in the Bayside municipality has more than doubled since 2010. Due to a lack of courts at BDNA's former home, players and team numbers had to be capped, with game running times reduced to add more matches.

Thanks to the Arianna Petrarca delivering high-quality, efficient illumination across all eight outdoor courts at Bayside Community Sports Centre, such restrictions are no more, fostering greater community participation and inclusion.



The Arianna Petrarca's innovative reflection system delivers low-glare lighting. By concealing the LEDs within the housing, light is captured and blended through a series of reflectors, ensuring uniform distribution across the playing surface at BCSC. This means that every centre pass, intercept and goal assist are clear and visible to participants, umpires and spectators alike.

Due to the non-symmetrical nature of the court configuration, a standard side or corner pole scheme along the entire playing surface would not be feasible. A number of easements further restricted pole and luminaire placements.

Advanced Lighting Technologies' expert and qualified lighting design team came up with a highly optimised design solution that ticked all the boxes.

As part of the commissioning process, we completed an onsite lighting audit, which confirmed compliance across all courts was achieved to Australian Standard AS 2560.2:2021 for Netball (mid-level local and regional competition).

Compliance with AS/NZS 4282:2019 (Zone A3 / Table 3.3) was also achieved where needed, with Arianna's advanced full cut-off optical system precisely directing light only where it's needed, with zero light emitted upwards. The luminaire's low-glare design minimises disruption to nearby properties and passing drivers on nearby Holloway Road.

### Sports Lighting Standards

The lighting at Bayside Community Sports Centre was designed and confirmed to achieve the light technical parameters recommended by the following Australian Standard for sports lighting:

**AS 2560.2:2021: Sports Lighting Part 2: Specific Applications**  
Table 2.9.1: Netball - Mid-Level Local & Regional Competition  
Light Technical Parameters: 200 Lux Eh & Uniformity  
(Min/Avg) - 0.60 (Min/Max) - 0.40

### Obtrusive Lighting Standards

The lighting at Bayside Community Sports Centre was designed and confirmed to achieve the light technical parameters recommended by the following Australian Standard for obtrusive lighting:

**AS/NZS 4282:2019 Control of the Obtrusive Effects of Outdoor Lighting** | Table 3.3 - Zone A3 - Medium District Brightness | Non-Curfew



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.**



**Advanced Lighting Technologies  
Australia Inc**

110 Lewis Road  
Wantirna South, Victoria  
AUSTRALIA 3152

T: +61 3 9800 5600  
E: sales@adlt.com.au

[www.adlt.com.au](http://www.adlt.com.au)

**Advanced Lighting Technologies  
New Zealand Ltd**

Unit 1, 9 Orbit Drive  
Rosedale, Auckland  
NEW ZEALAND 0632

T: +64 9 415 6332  
E: sales@adlt.co.nz

[www.adlt.co.nz](http://www.adlt.co.nz)