



Advanced
LIGHTING TECHNOLOGIES

[A HIT WITH THE LOCALS]

CASE STUDY

A NEW COURT FOR
ELTHAM TENNIS CLUB





Aerial imagery courtesy of Nearmap.

CASE STUDY

A New Court for Eltham Tennis Club

To meet increasing demand for sporting facilities in the area, the Eltham Tennis Club recently received a \$1.4 million upgrade, resulting in three new courts being built, bringing the club's total to ten. **Advanced Lighting Technologies** supplied the flexible, modular **Arianna Petrarca LED Floodlight** as part of the upgrade.

The Facility

Located in Melbourne's leafy North-Eastern suburbs, the Eltham Tennis Club is a popular mainstay of the local community, boasting more than 400 members, including 80 juniors. Previously, the club had been forced to hire external courts at other clubs to keep up with demand on weekends. The need for expansion was clear.

In partnership with the Victorian Government and funded by a grant from the Growing Suburbs fund (through the Department of Environment, Land, Water and Planning), Nillumbik Shire Council completed the upgrade in early 2021. The aim was to provide the local community with greater access to sporting facilities. A total of three new courts were built:

- Two new multi-sport courts (tennis and futsal) featuring a Plexicushion acrylic surface.
- One new tennis court featuring a synthetic clay surface.

Importantly, the courts were designed for people of all ages and abilities. The Plexicushion surfaces provide greater access for people with a disability, while the synthetic clay surface features Hot Shots markings for junior participants.

Requirements & Challenges

Tennis can be an incredibly quick, visually demanding sport. Both the ball and players move rapidly around the court, requiring high visibility from all directions for participants, officials and spectators alike. Players need to be able to judge the flight and speed of the ball quickly and accurately in order to react appropriately.

At Eltham, Advanced Lighting Technologies were engaged by engineering consultants Webb Australia Group to supply the lighting for the synthetic clay single court. The design brief was straight forward: a standard six-pole scheme was specified, and light levels had to achieve the recommendations listed in AS 2560.2.1-2003 for club and competition play, which dictates a maintained horizontal illuminance of 350 lux.

As this was a single standalone court, the design called for 3 poles and luminaires to be mounted on each side of the court (as opposed to the corners). A side-lit tennis court lighting scheme offers a number of advantages to alternatives, including less glare, lower poles and an improved ability to control spill light.

Australian and New Zealand standards recommend the following average maintained lux levels for each level of play.

250
LUX

Social Play

350
LUX

Club & Competition

1000
LUX

International



The Solution

The Perfect Sports Lighting Solution

The Arianna Petrarca LED Floodlight is a flexible and modular area lighting solution capable of delivering up to 150,000 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 tennis court or a larger sports field, the Arianna Petrarca offers a cost-effective, energy-efficient modern LED sports lighting solution.



SIX MODULES



TWO MODULES

Arianna Petrarca

- 5 YEAR WARRANTY
- UP TO 150,000 LUMENS*
- IP66 RATED
- LOW GLARE



*Six Modules

The new and improved **Petrarca 2.0 coming soon!** Featuring greater efficiency and improved optics.

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.

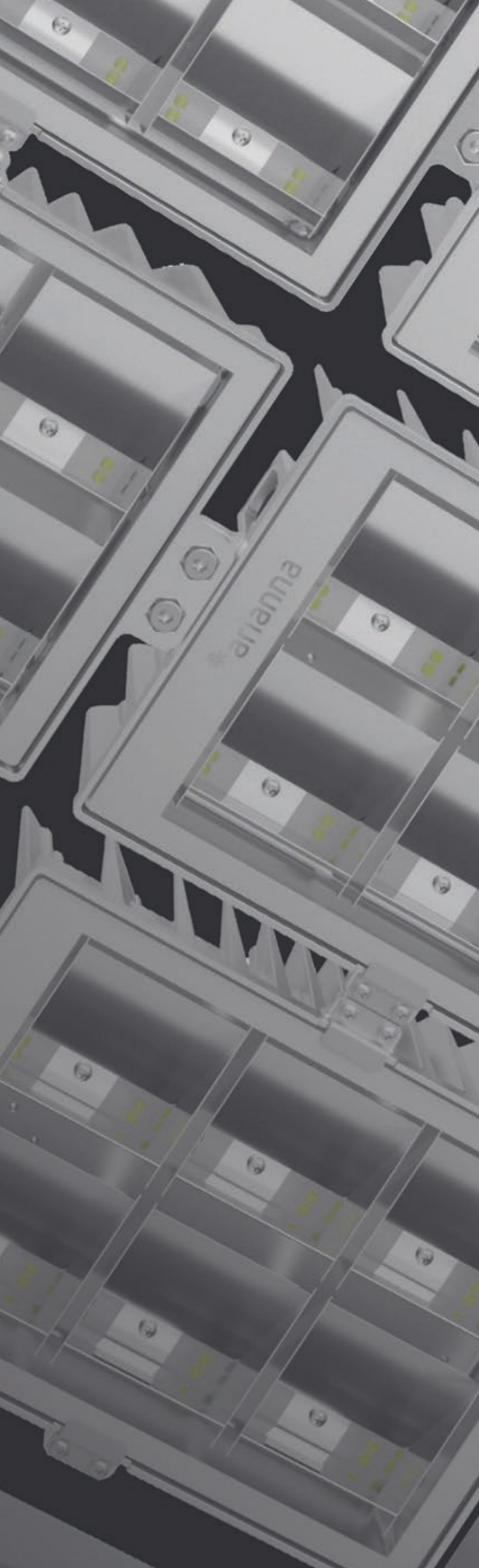
Arianna have integrated the principles of total reflection in their innovative luminaires, providing targeted solutions for different lighting needs.



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.

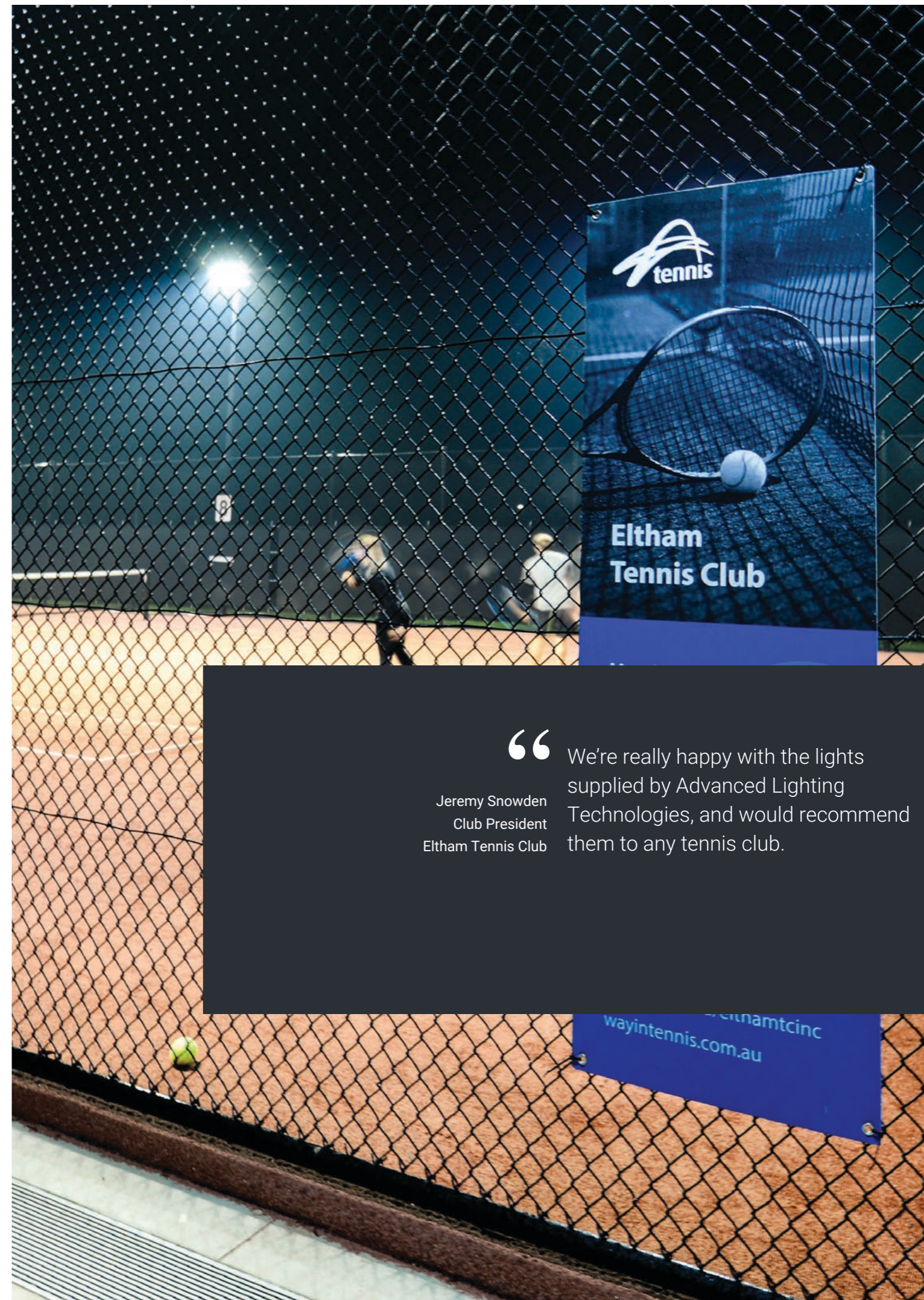
Notes: Displayed colour (black) is not standard. Four module variant used at Eltham Tennis Club.



Results

The Arianna Petrarca's revolutionary reflection system offers a low glare and efficient approach to illumination. The LEDs are concealed within the luminaire, and light is captured and combined through a series of reflectors before being cast onto the ground uniformly. This means that every ground stroke, ace, volley and smash are clear and visible, and players have no trouble perceiving the correct depth of the court and trajectory of the ball, even on the darkest of nights.

Thanks to Arianna's innovative full cut-off optical system, light is only directed where necessary and without waste, with zero light emitted upwards. The Petrarca's low glare approach ensures minimal disturbance to neighbouring properties and passing drivers, while its optimised thermal design and 5-year warranty means Eltham Tennis Club will be enjoying high quality illumination on the court 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.

Visit our dedicated tennis court lighting website for more – adlttennis.com.au.



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