

PHILIPS

Lighting

Floodlighting



Case Study

Switching to LED and
minimising light pollution
with Purley Bury Tennis Club



“ Purley Bury Tennis Club draws in players of all levels to learn and compete – and we always want to offer the highest standard in facilities, so players can focus on what matters; their game. We have the privilege of being in a fantastic location with close links to the community, so were keen for any renovations to be mindful of our neighbours and minimise light pollution. The LED solutions Signify provided was integral to achieving this, giving us the flexibility in use while remaining incredibly energy efficient,”

Andrew Gunn, Project Lead, Purley Bury Tennis Club

“ I worked with Signify on this project because I know they have a breadth and depth of quality luminaires with a range of optics. Having that choice is vital when undertaking complex projects such as Purley Bury Tennis Club,”

Lee West, Director, Sports Facility Planning and Design LTD

Minimising light pollution

Intelligent design through 3D mapping, as well as low tilt angles (0 or -1 degree), enabled the OptiVision LED luminaires to be placed higher and programmed with greater Lux, while minimising light spill on the neighbouring residential area.

LED for energy efficiency

Upgrading to LED almost halved the kW's needed at the highest Lux level. Installing powerful and efficient LED luminaires meant fewer fittings were needed, and overall, resulted in a 60% reduction in energy consumption.

Project details

- Modernising the lighting at Purley Bury Tennis club with ClearFlood and OptiVision LED so that the historic club would comply with LTA minimum performance criteria (400 Lux PPA, 300 Lux TPA).
- The greater power and flexibility of the OptiVision LED and ClearFlood led to eight fewer luminaires needed, and a 60% reduction in energy consumption on the site.
- Meets the ILP guidance for vertical lux and candela, while minimising light spill.

Project overview

Purley Bury is one of London's most historic tennis clubs, and they needed to renovate their outdated lighting system. They were looking to meet the LTA standard of lighting on the courts, not only to improve the playing experience for their members, but also so that the club could maintain its hard-earned reputation to draw in competitive and social players alike. The club's residential location, however, posed a challenge. They needed an innovative and tailored lighting design solution that would provide the right Lux levels while minimising light pollution. Using cutting edge 3D modelling to map out the installation of OptiVision LED and ClearFlood luminaires, Signify, alongside SurfaceLux Ltd and Sports Facility Planning and Design Ltd rose to the challenge and achieved spectacular results.

Challenge

Purley Bury Tennis Club wanted to update their lights to improve the quality of play for their members and comply with LTA minimum performance criteria (400 Lux PPA, 300 Lux TPA).

Their existing lighting system was 1kW Metal Halide Projector Floodlights which were not easy to use and consumed a lot of energy. They wanted to switch to a new lighting system to have more control over how and when the lights are used and to reap the cost saving benefits that come from energy efficient luminaires. The club was also looking to increase the column height of the floodlights which would offer better visibility during matches.

The principal challenge, however, lay in the location of the project. The courts are adjacent to a built up, residential area and any lighting system installed would have to be very carefully designed for light distribution control in consideration of the local community.

Solution

Easy, more environmentally friendly lighting at its best with ClearFlood and OptiVision LED.

LED lights were the obvious choice for this project as they operate with lower energy consumption providing outstanding light, quality and uniformity while ensuring safety and visual comfort. With LEDs there is also a much greater level of control, (i.e. easily switched on or off) and personalisation (with ClearFlood, it is possible to choose the exact number of lumens needed for the application).

For Purley Bury Tennis Club, the lighting consultant elected to employ a power saving arrangement with the LEDs, which will increase the energy savings over the long term for the club. This arrangement reduced

the number of fittings by eight, and the 22 installed were nearly half the power consumption of the original lighting fixtures at the club. This combined reduction, energy efficient LEDs plus the reduced number of fittings, has resulted in a 60% reduction in overall power consumption. This has an enormous impact on the bottom line and frees up budget for the club to invest in further renovations.

To tackle the challenge of higher lights vs light spill, OptiVision LED floodlights were also chosen for their precise light distribution. Therefore, regardless of wattage, the lights would focus where they were needed and minimise disruption to local residents while achieving maximum illumination on the courts.



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