

> CASE STUDY

MK DONS FOOTBALL STADIUM

Quick Facts

Fully cloud connected lighting solution for optimised energy savings.

Significant energy and maintenance reduction vs. previous installation.

Flexibility for different lighting scenes to suit events in the Marshall Arena.



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BACKGROUND

Milton Keynes Dons Football Club, usually known as the MK Dons, is a professional association football club in the EFL. Since 2007, the club has been based in the 30,500-seat Stadium MK based in the south of Milton Keynes.

Adjacent to the football ground and stadium is the Marshall Arena. This is a multi-purpose indoor arena that can host up to 5,000 guests. The main floor of the arena is over 2,500 square metres - it is big enough to drive an articulated lorry inside. As well as hosting the National Badminton Championships, the arena has been used to launch new models of cars, televised darts tournaments, large exhibitions, and concerts.

Outside, there is a main car park with spaces for 1,450 cars.

CHALLENGE

Much of the existing lighting, both indoor and outdoor, used metal halide lamps. Whilst these lamps produce a white light with good colour rendering, they have a comparatively short life, as little as 12,000 hours, and are not energy efficient. Both the frequency of lamp replacement and energy costs had to be reduced. At this point, it was decided to ask Holophane, also based in Milton Keynes, for possible solutions.



CITYMAX®

Innovation and efficiency for urban spaces.

THE SOLUTION

There were two main areas where the greatest gains could be achieved quickly.

MARSHALL ARENA

It was decided that the Marshall arena should be illuminated using the new Holophane **PrismPack** highbay. Whilst normally used in industrial situations, the client chose the PrismPack because of its flexibility, wide range of lumen packages and beam options.

This recently launched version of the IP65 PrismPack is available in a range of sizes that can deliver from 10,000 lumens to over 120,000 lm. This is achieved by combining a single LED module (up to 20,000 lm each) in groups of one to six. The LEDs have a Neutral White 4000K appearance.

For the Marshall arena, the twin-module, 40,000 lumens, version was used with a wide-angle distribution which achieves excellent uniformity and volumetric lighting over the whole of the area. The PrismPack has a colour rendering greater than CRI 80 and so team strips, corporate logos and exhibition posters are all seen in their true colours.

To further save energy, the PrismPacks are fitted with PIR movement sensors. They also use HolosAir smart controls for ultimate flexibility. The HolosAir system allows the MK Dons to easily create custom lighting scenes depending on the event in the arena.

The rated life of the LED module used in the Haloprism is over 100,000 hours at L70B50. Therefore, there are additional savings in lamp replacement and maintenance costs.

A total of 40 PrismPacks were used in the installation.

MAIN OUTDOOR CAR PARK

To support the large number of visitors to the stadium, there is a 1,450-capacity car park. The solution was found in the Holophane **City Max Large** where 100 luminaires have been used. They are all connected, and cloud controlled using the Holophane ControluxAir system. This system allows for further energy savings and optimisation across the project. Not

to mention the flexibility of changing settings with the touch of a button.

The CityMax is available with six different optical distributions. These range from a simple, circular symmetric distribution to various “streetlighting” broad and narrow patterns. At Milton Keynes, the symmetrical version with a 35,000 lm output has been used.

The Holophane CityMax Large has been specifically designed for retail parks, city centres and anywhere quality, precise lighting is required for a large area. The secret of their performance is found in the sealed prismatic borosilicate glass pods housing the LEDs. The excellent thermal management of the pods means that the LEDs have a lifetime of 100,000 hours (L70B50).

Furthermore, these pods are recessed in the body of the lantern which means that no upward light is emitted preserving the dark night sky.

The installation work was done by Goodship Electrical Contractors Ltd.

After meeting with Holophane, I was convinced they were the right lighting solutions partner for our car parks at Stadium MK.

I was so pleased with the efficiencies, and their help in bringing our energy usage down, that I also asked Holophane to look at the indoor lighting in the Marshall Arena and, using their intelligent control solutions, we not only save money, but also satisfy our clients and exhibitors with their lighting requirements.

Pete Winkelman,
Milton Keynes Dons Chairman

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MK STADIUM
MAIN OUTDOOR CAR PARK



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**MK STADIUM
MARSHALL ARENA**



PRISMPACK™

Scalable System

Taking high bay lighting to new levels of lumen output with superior light control.



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**MK STADIUM
MARSHALL ARENA**



