

# Case study

## M3, Hampshire



Location | M3, Junctions 13 -14, Hampshire  
Philips Lighting | Luma 3



**PHILIPS**



# Philips improves road safety and visibility at Junction 13 – 14 of the M3 with an energy efficient, low maintenance LED lighting solution



Before



After

### Fast Facts

**Customer**  
EM Highway Services Ltd

**Location**  
M3, Junctions 13 -14, Hampshire

**Philips Products**  
Luma 3

**Lighting Class**  
ME3

## Background

EM Highway Services has upgraded the lighting on a key stretch of the M3 motorway, which links South West London with Southampton. The new LED solution not only helps to reduce energy consumption and maintenance costs, but provides superior light quality that helps to enhance safety and security on the road.

## The Solution

The focus of the upgrade is one of the main routes into Southampton, the section of the M3 between Junctions 13 – 14, near Chandlers Ford. EM Highway Services operates and maintains this portion of the M3 on behalf of the Highways Agency. In identifying the new lighting, the use of sustainable practices and the desire to find the most efficient solution were key considerations, especially as monitoring of energy usage on this section revealed that the lighting was the main energy user.

The upgrade to LED involved replacing existing 250W and 150W high pressure sodium fittings with Luma 3. A total of 476 Luma 3 luminaires were installed, creating even light levels and distribution across multiple lanes, whilst adhering to strict lighting standards. A modular solution, Luma 3 provides great flexibility through a choice of LED configurations combined with a variety of high performance optics to deal with the multiple lumen package requirements of at times a 10 lane arrangement.

Furthermore, the Luma solution produces white light improving visibility, which is a major contributor to road safety as it enables drivers to detect movement faster and at a greater distance, giving them more time to stop. Additionally, because white light is brighter than yellow light in certain circumstances, it becomes feasible to reduce light output while not compromising on quality, and so further enhance energy savings.

Commenting on the upgrade Julian Nassar, Electrical Stream Project Engineer from EM Highway Services Limited says; “By using the Philips Luma LED technology, we have been able to provide high quality reliable lighting, using less energy whilst also saving on maintenance costs. This has provided increased safety for the road user through an improved light source.”

## Life Cycle Savings

The lighting upgrade is expected to save over £30,000 per annum in energy costs. The early feedback is that the initial energy savings on the previous installation is in the region of 69%. In addition to reducing energy costs, the Luma 3 luminaires benefit from a longer service lifetime, thereby providing significant savings in maintenance costs and disruption to road. It is estimated that a further £25,000 savings per annum will be made on maintenance.

Andy Poptlett Philips Regional Sales Manager – South said “With the volume of traffic on UK roads increasing, the role of lighting in improving the night-time driving experience is becoming more and more significant. As this project shows, LED solutions can deliver really strong financial benefits by reducing energy consumption, carbon emissions and maintenance costs. This is all without compromising on light quality and typically enhancing safety and security on the roads for the many drivers using them.”

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