



**PHILIPS**



Case study

GreenWarehouse

Case Study

**GreenWarehouse**  
system a 'shoe in' for  
Clarks' central warehouse



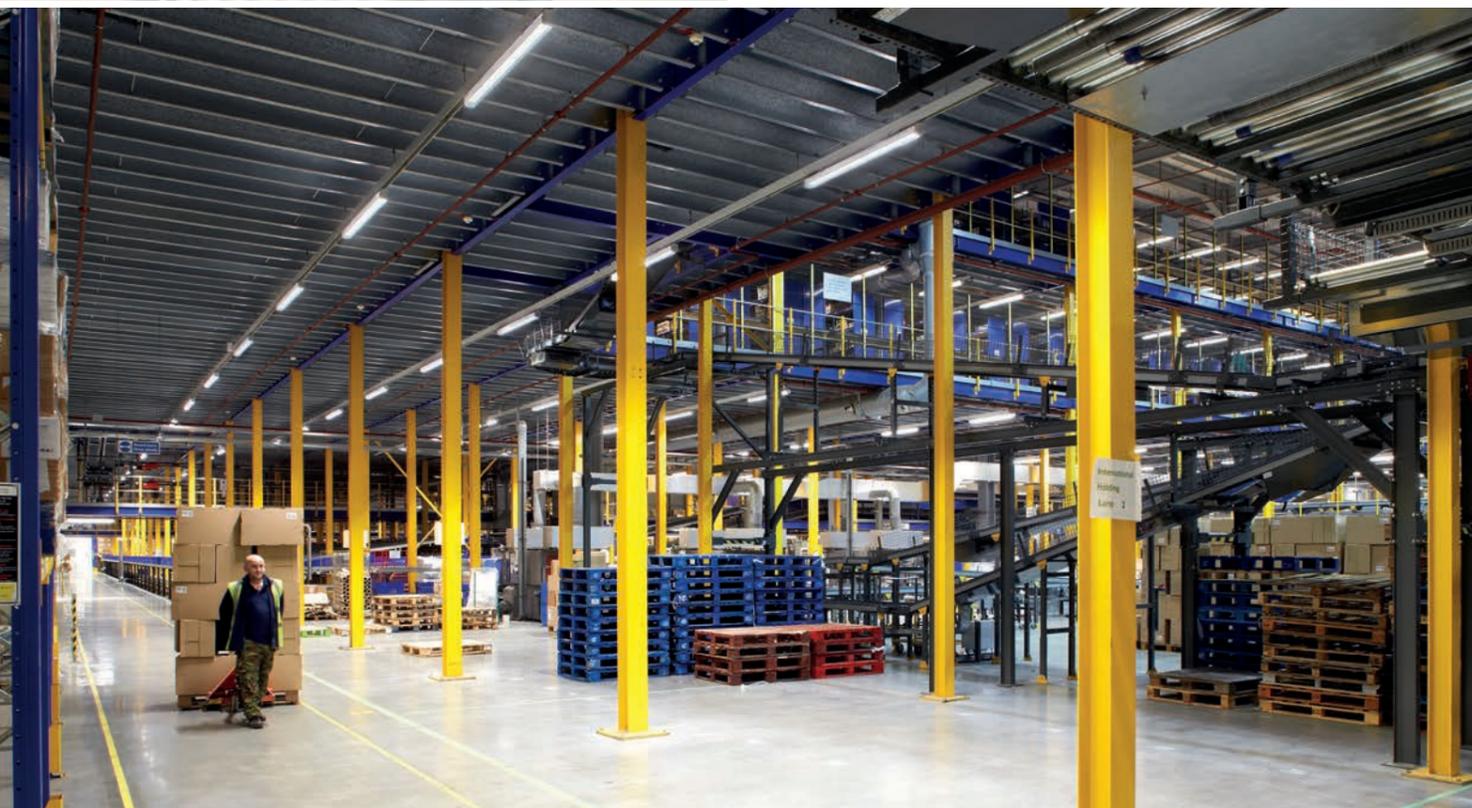


## Fast Facts

**Customer**  
C & J Clark Limited (Clarks)

**Location**  
Westway Facility, Somerset, UK

**Philips Products**  
Philips GreenWarehouse system



Westway offered significant savings,” explained Jayne Lomax, Group Head of Facilities Management at Clarks. “The inefficiency of the existing lighting was exacerbated by the control system not working as anticipated, so that much of the lighting was continually on even in unoccupied areas.

“There was also an issue with declining light levels as the lighting system aged, which was making it difficult for staff to read labels. In addition, the heat from the old lighting made conditions very hot in summer, especially on the upper mezzanine floor, so that we had to install air conditioning,” she continued.

Moreover, the maintenance requirements of the old lighting system were proving onerous with a necessity for frequent re-lamping. This also resulted in a ‘patchwork’ of different coloured fluorescent tubes across the facility.

To confirm the potential benefits of LED lighting, Clarks invited Philips Lighting to carry out a trial installation of the GreenWarehouse smart lighting system. Leon Wood, Head of Engineering/Onsite Facilities recalled: “The trial was carried out by comparing two different aisles between racks, one with the existing lighting and the other with the proposed new lighting. Energy consumption for each aisle was measured using smart meters so we could make a direct comparison.

“Philips also proposed an alternative to traditional zoning of the lighting in relatively large blocks, instead suggesting much smaller zones for finer control of the lighting in relation to occupancy,” he added.

“The trial validated Philips’ predictions and also enabled us to produce a business case, based on cost savings and predicted return on investment,” Jayne Lomax noted. “We then invited four other lighting manufacturers to tender for the project, as well as Philips, to ensure we were getting best value. Philips won the tender based on the quality of its products and technology, expertise and project management capabilities alongside the reassurance that the company would be able to support us through the eight-year warranty period and beyond.”

The new GreenWarehouse lighting system was installed as part of an end-to-end project managed by Philips Lighting, working closely with the Clarks team and the installers. It comprises 3,000 Pacific LED luminaires

linked wirelessly together to create flexible groups of control within wider controlled zones. The system uses advanced sensor technology for effective presence detection, even from a great height. As 85% of the processes at Westway are automated, the sensors were carefully positioned to ensure they are not triggered by moving machinery.

The wireless networked control system enables lighting to be dimmed when areas are unoccupied, with a fast response when someone enters that space. It is estimated that this smart control element of the GreenWarehouse system will contribute nearly half of the total energy savings achieved by the new lighting installation at Westway. The system also enables central monitoring of the lighting system’s energy usage and makes use of straightforward re-configuration methods for future flexibility.

### Minimising disruption

Scheduling of the work programme was particularly important. “Access to some areas was very difficult as a considerable amount of machinery has been introduced since the original lighting was installed,” Leon Wood explained. “As the facility operates 24 hours a day for 362 days of the year it was essential to avoid disruption, so much of the work had to be carried out during quiet times.

“To address this issue in the future, some of the luminaires have been re-positioned to enable easier access, while the improved light output of the new fittings means we have been able to reduce the total number of luminaires,” he continued.

### Summary

The Philips GreenWarehouse system is delivering significant energy and carbon savings for Clarks through improved lighting efficiency and reducing the requirements for comfort cooling. Overall, the total electricity consumption for the site has reduced by around 26% since the new lighting was installed.

Just as importantly, the whiter light of the LED-based system, along with the reduced heat output and higher light levels, has improved the environment for staff, giving a boost to morale and productivity.

**The Philips GreenWarehouse smart lighting system at Clarks’ Westway facility has reduced lighting energy consumption by around 70% through the intelligent control of highly efficient LED lighting. It has also created a more comfortable lit environment for staff.**

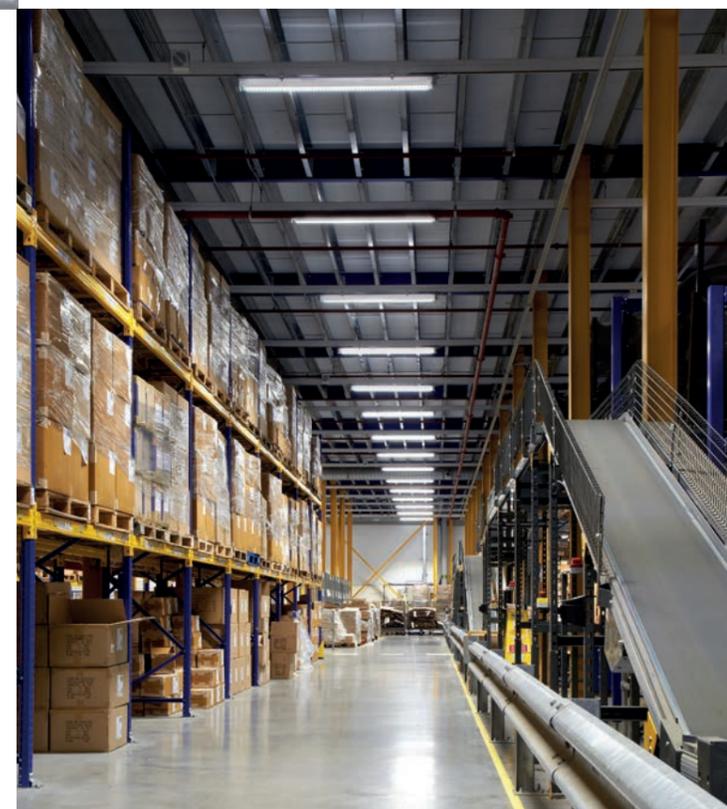
With headquarters in the UK, C&J Clark Limited (Clarks) has been renowned for its craftsmanship and position as the leading shoe expert on the high street for shoppers since 1825 with an archive of more than 22,000 styles. The company’s 47,000m<sup>2</sup> Westway warehouse and distribution facility in Somerset is on three levels (ground floor and two mezzanine floors). It has storage capacity for 4.9m pairs of shoes, with the capability to despatch 150,000 pairs per day at peak times.

Prior to the upgrade project, general lighting was provided by T5 fluorescent lighting controlled through a DALI lighting management system. The opportunity to reduce energy consumption and environmental impact whilst improving light quality were key factors in driving the upgrade to LED.

This decision was reflected by the company’s commitment to sustainability through its Corporate Responsibility programme, which includes improving energy efficiency in all areas. This initiative has seen LED lighting rolled out across many Clarks retail stores, so the benefits of LEDs and smart controls had already been established within the organisation. “As part of our corporate responsibility strategy we are continually looking for energy-saving opportunities and we identified that upgrading to LED lighting at

“ As part of our corporate responsibility strategy we are continually looking for energy-saving opportunities and **we identified that upgrading to LED lighting at Westway offered significant savings**”

**Jayne Lomax, Group Head of Facilities Management at Clarks**



“ **Philips also proposed an alternative to traditional zoning** of the lighting in relatively large blocks, instead suggesting much smaller zones for finer control of the lighting in relation to occupancy,”

**Leon Wood, Head of Engineering/Onsite Facilities**



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