



An ADNEC Group Company

EXCeL
LONDON

UFI SUSTAINABLE DEVELOPMENT AWARD 2015

EXCeL LONDON ENTRY

I Background:

ExCeL London is one of the UK's leading international exhibition and convention centres and hosts events of all types with organisers and visitors from across the globe. We are committed to being thought leaders in our market and to provide world-class facilities and services that are in accordance with our own Health & Safety policies and our Sustainability policy.

Situated at the heart of London's Royal Docks, ExCeL London has 100,000m² of exhibition and conference space and accommodates 4.1 million visitors and exhibitors per annum. The venue opened in November 2000 and was extended by a third in 2010. It now has 46 sub-dividable halls and hosts a wide range of events that differ considerably in size and lighting requirements.

With the original system we had very limited control of the lighting, so if exhibitors wanted small areas of lighting switched off this could only be done by disconnecting individual luminaires manually. Given that the luminaires are mounted at a height of 10 metres, this was time-consuming and expensive. Frequent lamp replacement was a further burden on our maintenance resources.

In addition, ExCeL London has a strong commitment to sustainability and is certified to both the ISO 14001 environmental standard and ISO 20121, which sets sustainability management standards in the events industry. Upgrading the lighting, therefore, has added to the already huge savings in carbon emissions that have been achieved in recent years. It also makes the venue more attractive to corporate customers with strong sustainability policies.

In 2014 ExCeL worked with Philips to replace all their lighting with Philips GentleSpace high-bay LED Luminaires and Pacific LED Green Parking System to meet the varying lighting requirements across the venue from the halls to the car parks.



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II Scope:

The lighting upgrade encompassed ExCeL's 46 dividable halls and 2100 parking spaces in two distinct projects.

The original lighting in the halls was old (up to 14 years), consuming significant amounts of energy and lacked flexibility for exhibitors. If an exhibitor wanted lighting off, then ExCeL would need to organise a cherry picker to turn the light(s) out before set up.

The 90,000 sq meter car park featured a range of luminaires that were either on, oftentimes unnecessarily, or off, when there were no exhibitions.

III Actions:

Exhibition Halls-

The original sodium lamps in ExCeL's 46 sub-dividable halls were replaced with GentleSpace LED luminaires, reducing the installed electrical load by over 60% and delivering an estimated 3 year payback when energy and maintenance savings were considered. ExCeL can now dim or switch off individual luminaires from a PC or hand-held tablet device, giving them great flexibility to address clients' lighting requirements very precisely.

Car Parks -

Philips Pacific LED Green Parking System has enabled ExCeL to greatly enhance its car park lighting while delivering around 84% energy savings and reducing lifecycle costs. Covering 90,000m² and providing 2100 parking spaces, the ExCeL installation is the largest Green Parking System in the world and the first of its kind in the UK.

IV Solutions:

The original lighting, much of which was 13 years old, consisted of 2,045 high-bay luminaires using 400W high pressure sodium lamps. In a turnkey project delivered by Philips and installers Elite Renewables, these have been replaced with 2,145 GentleSpace 138W LED luminaires, reducing the installed electrical load by over 60%. Combined energy and maintenance savings are expected to provide a return on investment within three years. A further financial benefit was that Philips agreed to spread the cost over two financial years.



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The GentleSpace luminaires are controlled through a DALI (Digital Addressable Lighting Interface) control system, enabling individual luminaires to be dimmed or switched off from a central PC or using a hand-held tablet device while in the halls.

Exhibition Halls

Energy efficient GentleSpace LED luminaires were installed in the 46 dividable halls, reducing the installed electrical load by over 60% and delivering an estimated 3 year payback when energy and maintenance savings were considered.

ExCeL can now dim or switch off individual luminaires from a PC or hand-held tablet device, giving them great flexibility to address clients' lighting requirements very precisely.

Car Parks

1141 energy efficient Pacific LED fittings and 225 occupancy sensors were installed to create zones of light. The zones dim to 10% when unoccupied and ramp up instantly to 100% when a person or vehicle is detected, delivering significant cost and environmental benefits and an estimated payback within 1.5 years.

With the wireless control network, there was no need to run control cabling throughout the car parks, reducing both the time and cost of installation.

V Results:

ExCeL's upgrade to Philips GentleSpace high-bay LED Luminaires and Pacific LED Green Parking System will benefit over 3.6 million visitors, 85 exhibitions and 250 conferences annually. In upgrading its lighting to Philips GentleSpace high-bay LED luminaires, ExCeL London has reduced its carbon emissions significantly while also improving the quality and responsiveness of the lighting for exhibitors and visitors.

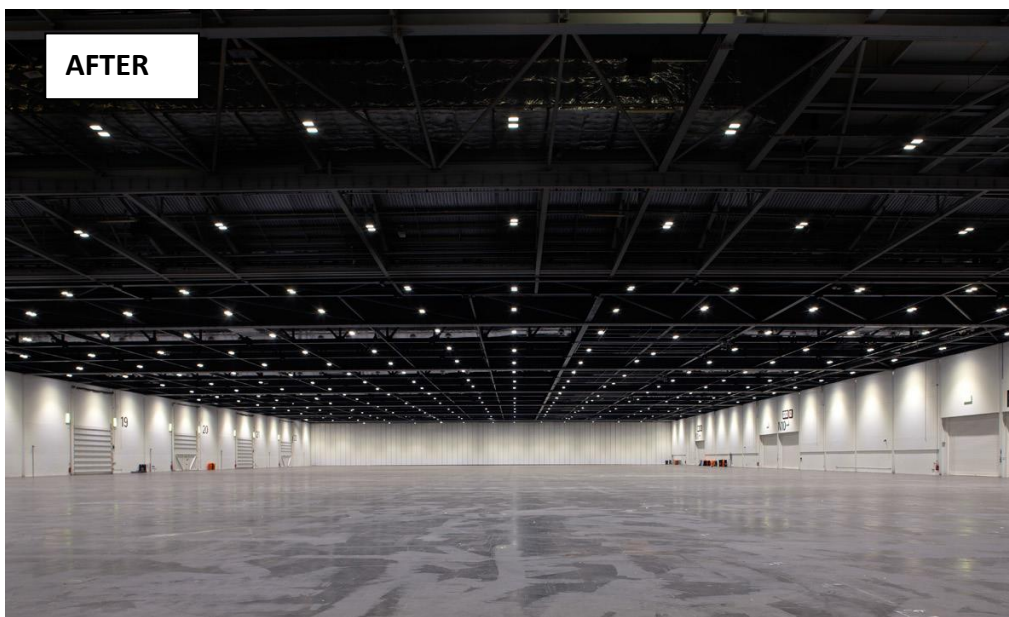
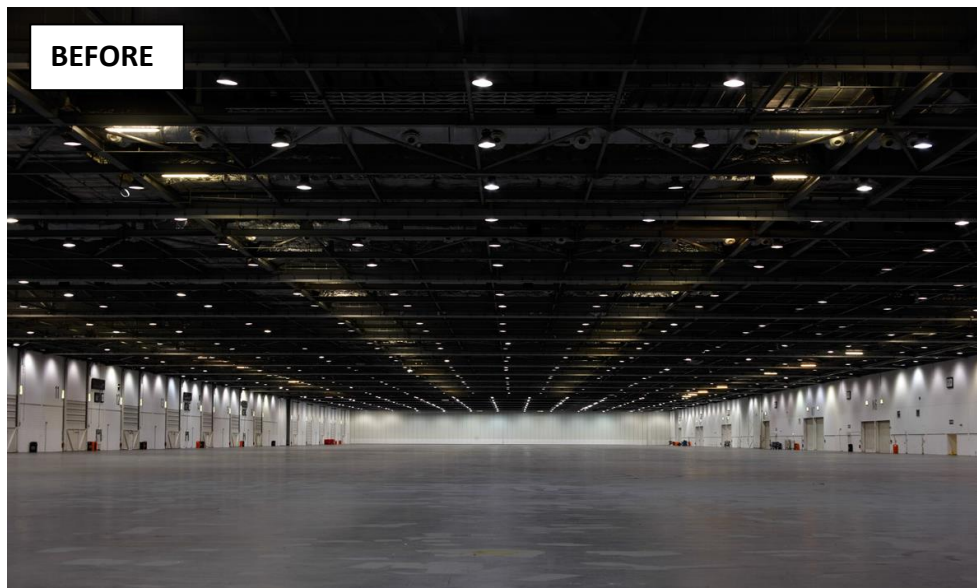
Exhibition Halls

- Reduced the installed electrical load by over 60%
- 3 year payback
- Enhanced control and flexibility
- Improved colour rendering for exhibitors

- Improved light quality and comfort for visitors

Car Parks

- 84% energy savings
- 1.5 year payback
- Light when and where it's needed
- Improved safety and comfort for drivers and pedestrians





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Stakeholder perspective – Brian Cole, Operations Director:

“We had very limited control of the original hall lighting system, so if exhibitors wanted small areas switched off this could only be done by disconnecting individual luminaires manually, which was time-consuming, expensive and a burden on our maintenance resources. The new installation is very easy for our staff to use and has already paid dividends for event organisers. At one recent show, for example, the organisers wanted around 50% of the lighting turned off. This would have been very difficult to achieve with the old system but the new system enabled us to meet this requirement with great ease and precision.

“As well as being more controllable, the new system gives us a much better quality of lighting. Whereas other lighting companies we spoke to simply wanted to sell light fittings, Philips invested considerable time in helping us understand the importance of colour temperature and colour rendering. The new lighting is a valuable sales tool and a significant point of difference for ExCeL, compared to other venues, as it enhances exhibitors’ displays and means they no longer have to install additional lighting on their stands to supplement poor ambient lighting.

“We are delighted with the new car park lighting, which has improved safety for drivers and pedestrians – and security overall. Installation was scheduled around our many events, ensuring that there was no disruption. The feedback from regular users of the car park has been very positive.”

“Philips managed the project very efficiently and there were no problems from signing the contract through to completion. The end result is excellent and we have already received visits from operators of other exhibition venues that are experiencing the sort of issues with their lighting that we used to have,” Brian Cole concluded.

