

LEDWAY from RUUD Lighting preferred choice at Aberdeen Airport



Transport terminals present some of the largest lighting design opportunities, but are perhaps overshadowed by the more prestigious projects involving the exterior lighting of buildings. However, the particular problems concerning the lighting of transport terminals are typified by a recent installation of street lighting for the new forecourt at Aberdeen Airport.

As with all major projects there were varying and sometimes conflicting design demands, and the lighting design was no exception. The issues of capital cost of the fittings had to be weighed up against the lifetime costs, which included maintenance and the environmental impact.

Because the airport operates 24 hours a day, 365 days a year, there is no down-time during which maintenance can take place. Unless a fitting could be found that was effectively maintenance free, the forecourt section of the airport would have to be closed down during maintenance procedures, causing disruption that was considered unacceptable and therefore to be avoided if at all possible.

The impact on the environment now goes further than evaluating the comparative energy consumption of separate lighting proposals. Consideration is also given to manufacturing practices and end-of-life disposal; even the humble fluorescent lamp requires special disposal.

As anyone who has ever tried to find a car parked at an airport at night will testify, the quality of lighting has not always been what it might be. Poor colour rendition and uniformity is something that we have all got used to. The poor quality of light can present security issues at a time when all organisations have to be increasingly vigilant.

BAA's expansion programme for Aberdeen, including alterations to the forecourt, has provided the opportunity to look at the airport street lighting, which in many cases was 30 years old. Robert Arnott, WSP and project manager, describes the transformation as between 'night and day'. Arnott goes on to say that the lighting quality is superb, with good uniformity and almost perfect colour rendition. The fittings have an expected lifespan of over 100,000 hours.

Images from left to right: One of the benefits of the new LED lighting at BAA Aberdeen Airport is reduced glare when compared with the original fittings, one of which can be seen on the right hand side of this picture.

Staff have commented that the white light from the new LED fittings increases their feeling of safety, whilst the site security report says they can see what is going on much better. This will be due to the improved colour rendering and uniformity.

By reducing the mounting height from 10m to 8m, savings have been made on the installation costs that have in no way compromised the overall effect of the lighting.

With regards to the environmental impact, Stuart Torpey, environmental compliance manager, is delighted with the new lighting. Based on a one-to-one comparison with an alternative fitting (similar to the existing), the new lighting runs at 45 per cent of the load, which will deliver 55 per cent energy savings. It can also be controlled to run at 50 per cent output during periods of low passenger numbers, which could reduce the energy consumption by as much as an additional 15 per cent. Furthermore, the new lighting contains no harmful or hazardous materials so even those tasked with disposal have been taken into consideration.

As the economic case for using LEDs becomes more compelling, it will become even more important for lighting designers to understand how LED lighting differs from other light sources. And like all innovations there will be leaders and followers. The LED installation at Aberdeen Airport shows that BAA is taking the lead, providing lighting that enhances the environment for passengers and staff, saves energy and is virtually maintenance free.

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