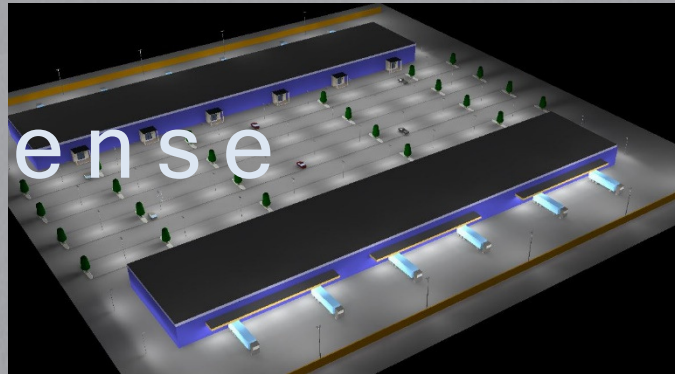


# Industrial Lighting Experience

Light-sense

Lighting Consultants



Website : [www.light-senseconsultants.com](http://www.light-senseconsultants.com)

Email : [jtelford@light-senseconsultants.com](mailto:jtelford@light-senseconsultants.com)

# Project Experience

## Southampton port - Gate 7

Southampton is a well established port complex, with many different companies running sites within the Associated British Ports boundaries. I was asked to come up with a design to upgrade and improve the lighting at the Gate 7 container site, this had to be achieved using the existing mast and positions on site.

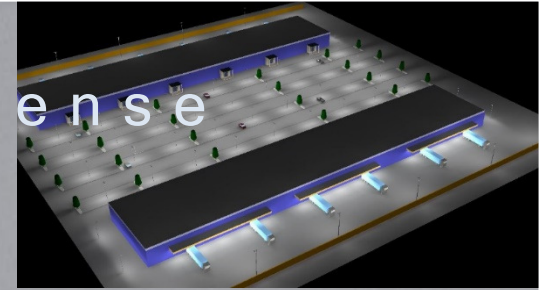
Southampton port has one of the highest electrical charges in the country so we were also tasked with reducing the energy consumption on site while still maintaining the lighting level for safe working. I selected a 1.375kW LED floodlight with good peak intensity to throw light into the area and a good wide distribution to maintain uniformity. Using an LED light source did reduce the energy consumption while still meeting the specification however using LED alone only reduced the energy marginally. The usage of the port was looked to see if the usage of the lighting can make even more savings and make the ROI greatly beneficial to the client.

It was found that due to HID lighting being used previously the lights were never turned off in the dark hours just in case a delivery or pick up was to be made based on shipping time schedules. This meant that some weekends and evenings the lights would be on continually without the site being used.

As we were using LED we introduced a wireless switching system that allowed the lights to be dimmed down to a security level, and be able to be brought up to 100% instantly. This brought the pay back /ROI within three years

# Light-sense

Lighting Consultants

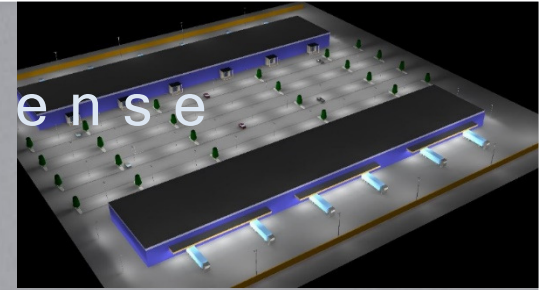




# Project Experience

Light-sense

Lighting Consultants



## Keflavik airport Iceland

Keflavik Airport was built in the 1940's by the US and was a significant NATO base for a while. It is now Iceland's main international hub and under a modernisation of the airport they built a new terminal island with three aprons with multiple aircraft parking on each.

I carried out a design to meet the ICAO standards and Aerodrome design standards for all three aprons. The lighting levels required where 20 Lux average Horizontal with a average to minimum ratio of 4 to 1, and a minimum vertical illuminance of 20 lux at a height of 2m above the apron in the direction looking away from the column side towards rear of the plane. All other service areas around the apron were lit to an average of 50% of the apron's Horizontal illuminance i.e. 10 Lux+ and an average to minimum ratio of 4 to 1.

Due to the distance of the runway away from the terminal I was able to use up to 20m masts without the limitation of the obstacle glide slope from the runway being any issue. This allowed the lighting to evenly cover the aprons with low floodlight elevations, to insure that the peak intensity of the floodlight does not fall within the eye line of pilots on approach to land, and as they pull up to the apron stop.

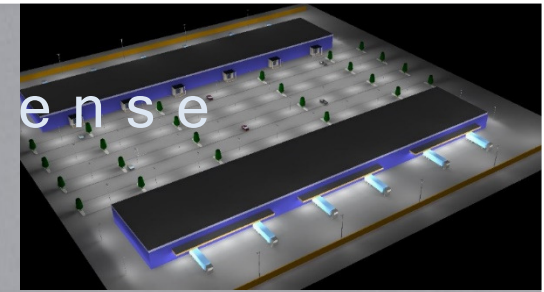
Column placement was key to a good design, the mast were placed between the aircraft apron boxes, to give good vertically illuminance on all critical surfaces of the aircraft for inspection and for service crew to work.



# Project Experience

Light-sense

Lighting Consultants



## Hidd Port - Bahrain

Khalifa Bin Salman port at Al Hidd port Bahrain is over 2 km long, the popularity of the port and the ease of supplying Saudi Arabia via the Bahrain Causeway meant that expansion in the future would be necessary.

The suitable land was not available deep water ships around the existing port so it was decision by the port authorities to expand in to the sea creating a man made island, to house the port expansion. I carried out a design nearly 10 years before the construction was completed, this was due to the complexities of creating the island. The design was revisited shortly before final completion of the island to bring the design up to date with the latest plans and products.

The design has five key areas, the container area and car storage areas were lit via 45m mast from the outside leaving the centre area free for mobile container cranes with task lighting and maximum parking areas.

The other areas were the administration offices and the outer circulation roadway which were lit with lower height columns and with increase uniformity.

The port is largely used for containers and new car transport however cruise ships and the US navy use the port for restocking and disembarking. The lighting levels are mainly 25 lux average and 5 lux minimum with increase illuminance to critical areas such a the lorry check in /out.

