

“**100** Evolution Security
**tonnes of carbon
saved annually**”



“Gemma Lighting’s high quality products provide the perfect lighting for our CCTV systems. We are looking forward to working with Gemma in the future and recommend their LED lights for areas under surveillance.”

Mark Hirst, MOD Contract Manager, Evolution Security.

Gemma Lighting Develop a Lighting Solution to Work with Evolution Security's CCTV Systems

Summary

- Whilst installing CCTV systems for a Ministry of Defence cadet base Evolution Security noticed that the current lighting was insufficient to give a clear image on surveillance monitors.
- Using expert knowledge of LED technology Gemma Lighting created a lighting solution tailored to suit the security project.
- Due to the success of the initial installation a further 980 fittings have been installed on cadet sites throughout the UK.
- As well as contributing to site safety these fittings are saving 100 + tonnes of carbon emissions and 613,000 Kwh a year in energy – contributing to the MOD climate change strategy.
- In addition to this, the cadet sites are saving £62,000 a year in energy bills.
- More installations are planned on cadet sites throughout the UK to improve security and reduce carbon emissions.

The challenge to illuminate a secure area with high quality light

Evolution is one of Europe's leading providers of electronic security systems for access control, CCTV and intruder detection systems. They develop relationships with multi-national, multi-sited clients designing models to suit different requirements which could be used as the basis for the development of a client's complex security systems.

Evolution had been commissioned to provide security systems for a cadet association in the Midlands. After surveying the site and recommending a new CCTV system, it was evident that the current lighting conditions were not suitable enough to pick up accurate colours and facial detail on camera. Incandescent light does not give enough visual acuity to create a high quality image

About Gemma Lighting

Gemma Lighting LTD was formed to create an innovative concept for everyday lighting requirements. Drawing on 25 years of experience in LED technology, the team at Gemma Lighting LTD continues to design, develop and manufacture a new generation of environmentally friendly LED lighting suited for their customer's individual needs.

on surveillance monitors, so an alternative light was required. The lights on site were left on throughout the night, causing light to fall onto neighbouring properties. This not only caused a disturbance to the residents but also wasted unnecessary energy. These issues shaped a specification for a light that worked with motion sensors and release targeted rays of high quality light onto specified areas.

Specialised LED knowledge used to create lighting to compliment CCTV operations

Gemma Lighting was commissioned to meet Evolution's specification. As Gemma design and manufacture their lights in the UK it was an ideal partnership in order for the two companies to work closely together. Gemma Lighting's account manager created lighting plans using specialised knowledge and experience of LED technology. The Spitfire LED floodlights were recommended and custom made to operate using motion sensors. These new fittings consumed 32 circuit watts; which was much less than the existing sodium flood lights that consumed 285 circuit watts. This achieved a reduction in energy consumption of 89% per fitting. They were installed in designed positions to create the maximum light distribution at the lowest possible energy consumption.

Gemma's LEDs give a light similar to daylight which provides an excellent image for CCTV. The light also has instant strike up to full capacity. This meant that on this project motion sensors could be used efficiently to catch any movement on camera. Furthermore, the Spitfire releases a light which is targeted and does not create any light pollution. This suited the specification to keep light off neighbouring properties and also meant that no energy was unnecessarily wasted.

A first-class result leading to various other security projects with Evolution Security

Evolution Security was pleased with the work Gemma Lighting had done. The new lights

worked perfectly with their security system. As well as those on site feeling safer at night, the neighbours were happy that light no longer fell onto their houses. The successful result led to Evolution wishing to work with Gemma on further projects. In total 980 fittings have been installed on cadet sites throughout the UK so far. This number is expected to rise as Gemma Lighting work with Evolution Security on more security installations.

Improvement in cadet base security and carbon emissions reduced throughout the UK

The new energy efficient installations have achieved in reducing carbon emissions by at least 100 tonnes per year; this contributes to environmental efforts made by the MOD. The environmental benefits of using LED contributed to the great success of this project. The lights are currently saving 613,000 Kwh per year in energy; meaning the cadet bases are also saving £62,000 in energy bills per year.

Gemma Lighting's LED technology have been used in various other CCTV surveillance projects in the UK, working with security organisations to achieve impressive results.

Advantages of LED lights

1. More power to light not power to heat = **save on energy bills by up to 90% and reduce carbon emissions.**
2. LED has at least 10 years life = **save on lighting maintenance costs**
3. Zero light overspill = **no light pollution to surrounding areas**
4. Pure white light (close to daylight) = **excellent visual acuity for CCTV**
5. Instant light (100ms switch on time) = **perfect for motion sensors/saving energy when not in use**
6. Impact resistant casing = **safe from vandalism**