



Lighting and Illumination Technology Experience
Limited



Case Study

Edinburgh Castle

‘Positioned high on an extinct volcano’



Positioned high on an extinct volcano and overlooking the capital city of Scotland, the Edinburgh Castle is as a major visitor attraction due to its historical significance and architectural beauty. This iconic symbol, which dominates Edinburgh's skyline, holds about a thousand years of history dating back to the 12th century, and remains home to an operational military station.

The 384,670 sq ft (35,737 m²) fortress holds frequent large-scale events, including the Edinburgh Tattoo, St. Andrew's Day, Christmas, and the Hogmanay. The previous conventional lighting system installed on the castle required several days of cumbersome labor to apply gels to the fixtures to create colored lighting effects onto the castle's façade and perimeter stone walls. In addition, there was a substantial running cost to maintain the conventional fixtures.



In 2013, LITE Limited was commissioned to work alongside architect Historic Scotland to revamp the 10-year old lighting with an LED solution. Several challenges arose during the three-month installation. The wireless control system was rejected due to the thick stone walls blocking the signal, and in order to preserve the fabric of the building the use of existing floodlight positions and mounting brackets was requested when possible and only the existing infrastructure could be used for power.

Philips Color Kinetics was chosen to provide the fixtures to update the castle's lighting system because of their previous success in working in similar challenging circumstances. To deliver the advanced control of the color-changing lighting fixtures, LITE Limited chose Philips Color Kinetics IntelliPower. This innovative lighting control system can deliver high bandwidth, digitally controllable LED lighting solutions without requiring any rewiring of the historic building. "Quite simply, the job couldn't have been done without IntelliPower," said LITE's Sales Director, Andrew Milestone. "We believe it's the first installation of its type on the UK mainland."



ColorBlast Powercore, ColorReach Powercore, ColorReach Compact Powercore, ColorBurst Powercore, and ColorGraze Powercore fixtures were arranged around the undulating contours of the site to light the façade. For most of the year, the castle is illuminated with a warm white light. During special events, the castle is transformed with a parade of lively colors to reflect the mood of the celebration.

The power consumption was significantly reduced using LED lighting, resulting in a savings of £2,400 per year (approximately \$3,200). "We have a commitment to try to reduce the carbon footprint of the castle," said David Storrar, the Head of Conservation at Historic Scotland. "Our target for 2015, we expect, is a 25% reduction in power usage, and changing the floodlighting scheme--that was one aspect in trying to achieve that target."



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