

# TOSHIBA LIGHTING HITS THE RIGHT NOTE FOR THE ROYAL COLLEGE OF MUSIC



With the reduction of carbon footprints being top of the agenda for the UK Higher Education sector, the Royal College of Music (RCM) is an establishment that has made significant progress in achieving some challenging targets.

The South Kensington based conservatoire has been working with the Carbon Trust to lower its emissions and save money along the way, with a clear goal in mind: to reduce its carbon footprint by 34% by the end of the 2019/20 academic year compared with its baseline year of 2005/6. Potential overall financial savings to the College are estimated at around £124,000 by 2013-14.

The RCM maintenance team takes care of the RCM's entire estate, including the magnificent and iconic Blomfield building, built in 1894. The team has a holistic approach to meeting these targets; they focus on effective energy management and a purchasing policy that works towards sustainability, energy efficiency and recycling. To meet its challenging target, the team continuously seeks ways to reduce carbon footprint across all of its operations. Lighting efficiency was identified as one of the key areas for improvement, as lighting contributed 60% to the overall energy bill.

## THE REQUIREMENTS

Following a recommendation from one of Toshiba's existing customers, the RCM maintenance team gave Toshiba the challenge of creating energy savings that would contribute to achieving the college's ambitious targets.

The Parry Room, a lovely space for gala receptions and special performances, was the first room that Toshiba was tasked with. The wood panelled room is situated high in the roof space of the main college building, with excellent views of the Royal Albert Hall. However amazing the room is, it poses some challenges to the maintenance team. Paul Russell, Maintenance Engineer at RCM, says: "Its role as a performance centre means it's constantly in use for shows, college events or simply practice sessions. Closing it down for any maintenance work is inconvenient, incurs high manning costs, and is also risky, as scaffolding is needed to change a single bulb in the high ceilings that are 6.5m high."

The Museum, the second space within the college which Toshiba tackled, posed a different challenge with its need for warm and ambient light – it was important that the new fittings complemented the wood and that the lamps didn't cause any damage to the artefacts. The RCM's collection includes some 1,000 musical instruments and accessories, dating from the late 15th century to the present day.

It's a unique resource for RCM students and staff, as well as for researchers and performers worldwide.



The RCM Library was another area that needed attention. The Library holds some precious artefacts, including rare, early 16th-century printed music, so the lighting couldn't be too harsh and there was a need for cove lighting, as well as for lamps on the shelves to present books in good light.

### **THE SOLUTION**

Keeping the RCM's green credentials in mind, Toshiba suggested replacing a variety of incandescent lamps the college was using with light-emitting diode (LED) lamps, as they offer substantial energy and cost savings to organisations. They consume up to 80% less energy compared to halogen or incandescent lamps and would substantially contribute to the RCM's overall environmental targets.

In addition to these energy and cost savings, Toshiba's LED lamps will also significantly reduce maintenance costs for RCM, as they can last up to 20 times longer than their incandescent or halogen counterparts. With 40,000 hours of life – more than 10 years of professional use – the new LED lamps will need replacing very infrequently, cutting out the expense of sending out trained workmen to install scaffolding to replace lamps in the building's high ceilings.

During 2011 and 2012, Toshiba's LED lighting was installed in all three areas. This proved to be a perfect solution for the RCM, as the maintenance team has already begun seeing the benefits of higher efficiency lighting through lower electricity costs while the disruption to staff and students caused by maintenance works has been dramatically reduced in the classroom and library areas. The LED lighting will also help preserve the valuable artefacts on display in the Library and Museum thanks to vastly reduced amount of UV light produced compared to other technologies.

### **THE RESULTS SO FAR**

Installing state of the art LED lighting in the Parry Room alone reduces carbon emissions by 18.98kg and generates an impressive cost saving of £4,158 per annum, while installation of LED lighting in the Donaldson Room in the Library saves 9kg of carbon and £540 per year.

Replacing old lamps with LEDs in the Library's corridor results in further savings of 5,000 kW per hour and changes to the lighting in the Museum saves an additional £1,400 per year.

Overall, by the end of 2011 the RCM maintenance team achieved an 8% reduction in total emissions through all the efficiency projects that have included lighting, but also new hand dryers, installation of water saving devices and insulation of lofts. Matthew Nicholl, Building Manager at the RCM, says: "We have a holistic approach to ethical and sustainable procurement and maintenance, and Toshiba has been a successful partner in realising this commitment with the College."

"We were looking for a solution that would be there forever and the results delivered by Toshiba were far better than we imagined. Our carbon reduction plan is long-term and so is the solution that Toshiba offered us," Matthew concludes.

### **PRODUCTS USED**

- E-CORE 2000 Downlight
- GX53
- PAR 20
- PAR30
- LED Weatherproof

[www.toshiba.com/lighting/](http://www.toshiba.com/lighting/)