



CANTERBURY CHRIST CHURCH UNIVERSITY

WITH GROWTH COMES RESPONSIBILITY;
LED UPGRADES PROMOTE
A SUSTAINABLE FUTURE FOR
EXPANDING UNIVERSITY.

Dextra
LIGHTING

ABOUT THE CLIENT

Dextra Lighting's cutting-edge LED luminaires streamline Canterbury Christ Church university towards reaching low carbon status, facilitating its access to funding for government sponsored energy efficiency projects.



In 2010, Canterbury Christ Church University launched a 5 year Carbon Management Plan to manage the inevitable increase of carbon emissions caused by a prolonged period of growth. The aim of this programme is to reduce overall energy use by 25% by 2016 ahead of Phase 2 targets set by the Climate Change Act of 2008. The university has since made considerable investments in energy-efficient lighting to reduce its footprint and deliver savings in operational costs. In 2015 alone, it dedicated £95K to LED upgrades in three of its main lecture theatres, winning bids for a number of energy-efficiency loan schemes such as the Government's Salix Fund and HEFCE's Revolving Green Fund. These programmes allow public sector bodies to fund energy efficient projects, offering 100% interest free loans, payable through recycled energy savings.

Salix Finance reports that LED lighting, is currently amongst the most popular energy-efficient technology funded by their programme, as it offers significant and immediate reductions in energy bills and fast ROIs. In other words the more efficient the lighting, the quicker loan repayments are made. Once the loans are paid off, the savings can then be reused into improving the university's estate.

The success of its Environmental Management System (EMS) has received international recognition through the ISO14001 standard in 2013, and has led the institution to climb up to #17 in the People and Planet Green League, after securing three consecutive first class awards. The university's improved performance has also affected its position on the CRC League Table, allowing it to secure more revenue through the scheme.

Being an active member of the Environmental Association of Universities and Colleges (EAUC) and the London Universities Environmental Group (LUEG), Canterbury Christ Church University believes in setting an example of best sustainable practice in the HE sector. Having built a strong and trusting business relationship with appointed electrical installers, Cloakes Ltd of Folkestone, Dextra Lighting were immediately specified for the refurbishment project, to provide a lighting solution in line with the university's green policies.

THE BRIEF

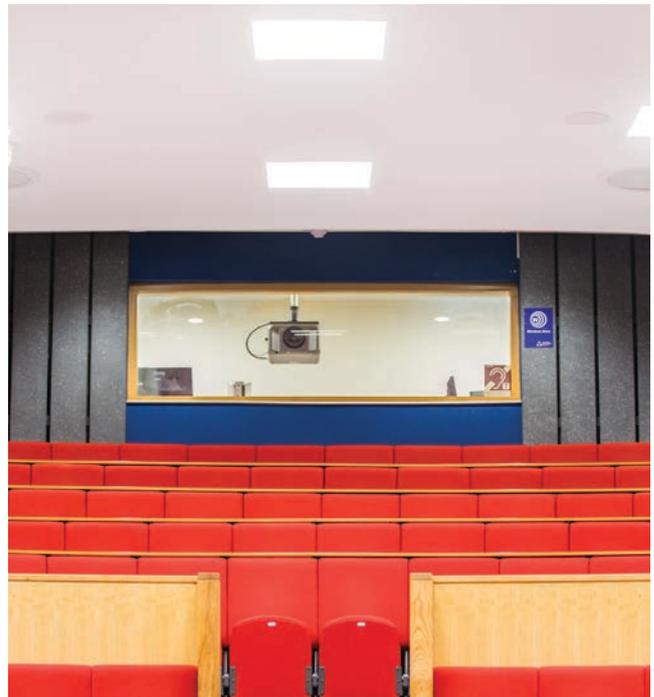
The university required LED replacements for their existing fluorescent, C2 and halogen fittings in three of its lecture theatres; Powell, Ramsey and Michael Berry, which are used for teaching and hired out for private conferences and events. Although the primary goal of the phased upgrade was to improve efficiency, the new lighting was to help create a new look suitable for a modern educational establishment. The upgrade would help boost the university's profile by improving user satisfaction of its facilities and attract new students.



Lecture theatres require flexible lighting controls to support a variety of events and activities, including film or slide projections, demonstrations, speeches and open seminars/ conferences. The new lighting control system had to be calibrated for precision use, and be easily commissioned by university staff.

The fittings themselves needed to provide visual comfort for students, visitors and staff, whilst complying to all safety requirements for such venues.

Finally, to maintain a consistency of style, the same set of products were to be used in the lighting design for each room.



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THE PRODUCTS

MAIN HALLS – PROTEC LED and HI-TRACK LED.

The Protec LED downlight was used as primary lighting for the main halls. With efficiency being a number one priority, this luminaire greatly outperforms the existing fluorescent downlights and was chosen for its outstanding energy saving capabilities. By combining the latest Lumiled LED sources and drivers with high-quality anodised aluminium reflectors, the Protec LED offers light output ratios in excess of 90% whilst operating at an impressive 100 Llm/w on average.

Alongside premium performance, the Protec LED range offers maximum versatility with a wide selection of options including: custom bezels, beam angles, interchangeable colour attachments, reflectors (specular or semi-specular) and covers (rated IP44 or IP65 for bathrooms or wet areas), to make sure each installation is tailored to suit the application. For the lecture theatres, the fittings were delivered with attractive white halo attachments, grey bezels and Opti-Spec reflectors for optimal light distribution and to match the colour scheme and interior design of the halls. A large number of luminaires were supplied with integral three hour maintained emergency lighting with auto-test functions in compliance with safety regulations.

BSEN 12464 glare compliant variants were supplied to for maximum visual comfort and to minimise glare during the use of monitors and projectors. Compatible with a range of sensors and dimming options, the luminaires were also provided with DALI dimming function, which allowed the lighting to be easily adjusted from the theatre's control rooms. Where applicable, these lighting controls can be combined with standalone sensors from Dextor's Reacta range for presence and daylight detection, to harvest additional energy savings.

The Protec's versatility extends to installation as it is suitable for multiple surfaces including: plasterboard, mineral fibre and metal tile installation. A practical four point self-clamping spring bracket allows for a quick and cost-effective installation into ceiling thicknesses between 3mm and 30mm.

To replace the existing halogen spotlights, the Hi-Track LED luminaire was

installed at various locations to act as accent lighting and illuminate the podium for a range of track mounted LED spotlights, is designed to adapt to a variety of styles, layouts and colour schemes and offers maximum flexibility at the point of installation and beyond. Its three circuit adaptor allows luminaires to be positioned anywhere along the length of the circuit track and finer, post-installation adjustments can then be performed quickly and easily, by rotating and pivoting the spotlights individually to suit the application. Rotary dials also allow the fitting to be switched on or off when required.

The luminaire is manufactured in high-quality die cast aluminium, combining durability with the aesthetic appeal of its modern design. Available in a range of body styles, accessories and colours, the Hi-track allows each installation to be fine-tuned to the client's requirements. The spotlights were supplied in a vertical style body, with a 25 degree beam angle to provide optimal light coverage throughout the halls.

The Hi-track is designed to create an inviting atmosphere and provide effective and flexible directional lighting wherever installed. By combining the latest Lumileds LEDs with a high-efficiency aluminium faceted reflector, this product offers exceptional light quality and distribution, with a colour rendering of 80+, in both 3000k and 4000k colour temperatures. Available in lumen packages of up to 3000lm, the Hi-Track gives lighting designers the freedom to create the most efficient solution for each application.

The Hi-Track was also delivered with DALI dimming protocols, allowing light levels to be controlled from a centralised system alongside the Protec LED.

Both the Protec LED and Hi-Track LED ranges have firmly established themselves across a variety of sectors, experiencing increasing demand for high-specification design projects. The success of these products is owed to combining premium performance and maximum versatility into a single attractive package.



THE PRODUCTS

CONTROL ROOMS – MODLED SLIM.

The control rooms were provided with a simpler yet effective solution in the form of the Modled Slim recessed luminaire. Supplied in a 4500lm capacity, only two 600 x 600mm fittings were required per room to achieve the desired lux levels. DALI dimming controls (also available in HFR, Switch and DSI) and three hour maintained emergency were also provided with the luminaires. The Modled Slim was also selected for its compatibility with lay in installations in both 15mm and 24mm exposed T suspended ceiling systems.

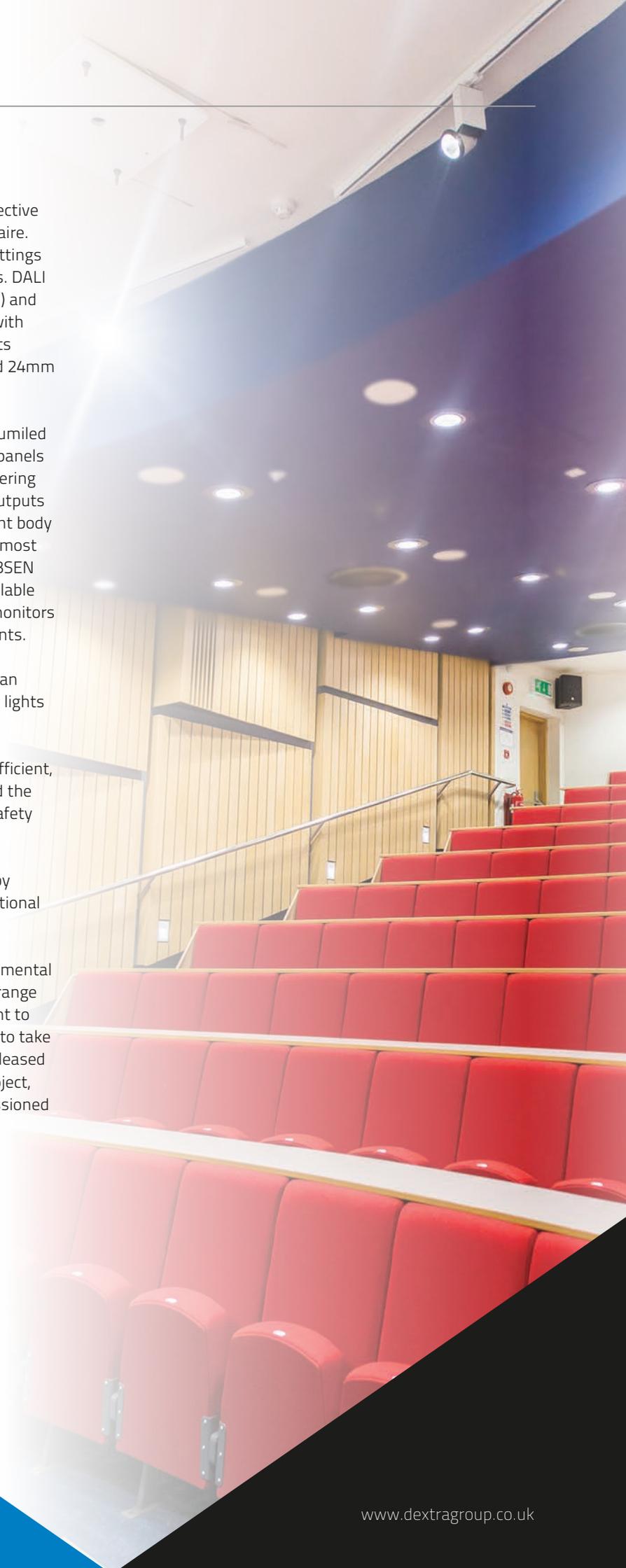
The Modled Slim boosts the efficiency of its premium Lumiled LED sources by utilising advanced polycarbonate optic panels with up to 93% transmission and excellent diffusion, offering improved visibility and comfort for staff. With lumen outputs ranging between 3500 and 9000lm across three different body sizes, the luminaire allows installations to be designed most efficiently for either retrofit or new-build applications. BSEN 12464 compliant glare reduction technology is also available with this range making it ideal for applications where monitors are in use, such as offices and educational establishments.

The centralised DALI control system now also provides an exciting scene setting which gradually dims the theatre lights when the visitors leave the hall.

Other products used in this project include: the highly efficient, low maintenance EXI LED emergency exit luminaire and the LED 3 emergency module to comply with the venues' safety requirements.

All LED products featured in this project were covered by Dextra Group's comprehensive 5 year warranty for additional peace of mind.

Once again, Dextra Lighting's sound ethical and environmental credentials, advanced manufacturing capabilities, vast range of affordable energy-efficient products and commitment to total service, have allowed educational establishments to take control of their journey towards a sustainable future. Pleased with the success of the initial phases of the lighting project, Canterbury Christ Church University have since commissioned an LED upgrade for its Old Sessions House.



FEATURED PRODUCTS



MODLED SLIM



HI-TRACK



PROTEC LED



EXI LED



LED3