EAST SUSSEX HEALTHCARE NHS TRUST: CONQUEST HOSPITAL

SUSSEX NHS TRUST ACHIEVE EXCELLENCE, VALUE FOR MONEY, AND IMPROVEMENT FOR MAJOR HOSPITAL

Dextra LIGHTING

ABOUT THE CLIENT

Conquest Hospital's new Orthopaedic and Fracture clinic benefits from the modern functionality and energy-efficiency of Dextra Lighting's MODLED and Impervia luminaire ranges.

East Sussex Healthcare NHS Trust is one of the largest healthcare organisations in the county, serving 525,000 people and employing over 6000 dedicated staff. The Trust operates from two main district hospitals, which provide 24 hour care in an extensive range of surgical, medical and maternity services supported by diagnostic and therapy services.

To better serve the community, the Trust has invested £500,000 in a new Orthopaedic outpatients and fracture clinic at Conquest Hospital in Hastings. Matron Trudi Thomson describes the clinic as "far more spacious than our previous area offering patients a better experience. With our 10 new individual consulting rooms we are able to offer patients greater privacy and dignity."

In reference to the upgrade and other ongoing refurbishments, NHS Trust's mission says: "We will use our resources efficiently and effectively for the benefit of our patients and their care to ensure our services are clinically, operationally, and financially sustainable."

Following a history of successful projects with the Trust, Dextra Lighting were approached once again by John Harratt on behalf of East Sussex's Estates and Facilities Department, to upgrade the lighting in the entire clinic.

Over the years, Dextra Group plc has remained the Trust's manufacturer of choice due to its unrivalled delivery times in the UK and wide range of high-quality, energy-efficient luminaires designed specifically for the health sector. The Trust expressed that as a leading UK manufacturer, Dextra Group showed a greater understanding of what their organisation required in terms of design, project time-frames, pricing, compliance issues and regulations.

With many years of experience of working with the NHS, Dextra Lighting is equipped to understand the sector's core needs and standards, and during this time has been able to build good relationships with term contractors. In the case of Conquest Hospital, it was Booker & Best of Hastings, who worked closely with Dextra's designers and specification team to deliver the project to the Trust's exact requirements, on time and within budget.

THE BRIEF

A new sustainable lighting solution was required to replace the old, underperforming fluorescent lighting in the department's ten consulting rooms, large plaster and examination rooms and two waiting areas.

The luminaires selected would provide appropriate lighting in each area to aid medical tasks or simply put patients at ease whilst waiting to be visited.

All health and safety regulations specific to NHS buildings were to be observed as well as guidelines regarding lighting design for clinical areas. The upgrade aimed to provide the hospital with the opportunity to balance quality with cost-effectiveness, by abiding to the PEAT (Patient Environment Action Team) and CQC's (Care Quality Commission) stringent assessment criteria for quality, comfort and safety.

With budgets constraints, rising energy prices and stringent eco-legislation affecting the public sector, all improvements at the hospital would need to establish and maintain economic and environmental sustainability. Handpicked energy-efficient luminaries would save the Trust money in the form of significantly lower electricity bills, and the reduced emissions would allow the hospital to perform better in the Carbon Reduction Commitment league table for further financial benefits.

Dextra Lighting's LED and latest T5 fluorescent luminaires are listed in the government's Energy Technology List, which provides procurers with full eligibility to the Enhanced Capital Allowance scheme for 100% tax exemption for the first year of purchase. This opportunity makes it easier for the public sector to invest in more sustainable and effective technology that will help secure better services to the communities they serve.

In addition to energy savings, maintenance and installation costs would also need to be kept to a minimum to allow the Trust to free up capital for frontline services in need of improvement.

Aesthetic appeal was also an important aspect of the design, as the Trust were looking for a lighting solution that was not only efficient but also attractive and different from the usual hospital lighting.

THE SOLUTION

MODLED Office – Waiting Rooms & Consulting Rooms

Visual comfort and clarity with no comprise to efficiency and style

Lighting for both the waiting area and consulting rooms required high visual performance, putting the patients' comfort first as well as offering exceptional clarity to help staff fulfil clinical and administrative tasks. Dextra Lighting needed to supply a product that would limit discomfort glare, create an inviting and relaxed atmosphere, and offer safe mobility to all occupants whilst satisfying today's energy requirements. The answer was the MODLED Office recessed luminaire.

To make the most of its high-quality Lumileds LED source, the MODLED Office's dual-optic design combines a central microprism optic and a high-transmission diffuser to balance brightness with glare control. Optimal light levels can then be achieved using cost-effective luminaire spacings as wide as 3m by 3m, with excellent distribution; avoiding any unwanted shadowing or poorly lit corners. The MODLED Office therefore offers a triple compliance package, satisfying ECA, L2 and BSEN 12464 criteria.

Using a lay-in (pull-up version also available) 2767llm version, the recommended 400lux and BSEN 12464 glare limitations for both the 3000 candelas per square metre above 65 degrees and UGR19 were met, providing optimal lighting for staff using computers in both the reception and consulting rooms. A 4000k, "cool-white" colour temperature was selected throughout, to create a fresh, relaxed and welcoming environment.

A higher, more controlled light quality will improve the well-being and productivity of patients, visitors and medical staff whilst consuming approximately 70% less energy than typical HID or fluorescent equivalents.

Unlike the previous fluorescent lighting, the MODLED Office's LM80-verified 3535 HE Lumileds LED source ensures that once installed the luminaire provides 90% lumen maintenance and increased reliability for the first 60,000 hours of operation saving the Trusts the ongoing costs and disruptions of frequent lamp changes.

The MODLED Office is available in a wide selection of outputs ranging from 1900llm to 7422llm across two body sizes. Integral emergency, dimming and sensor control options to ensure compliance to safety regulations and harvest energy savings throughout the working day.

The luminaire also offers a unique design compared to most recessed panel fixtures, which combines the practical and the aesthetic with its two optic frames. The external one is manufactured in steel and powder-painted white, whilst the internal one separates the micro prism panel which allows for added glare control.

THE SOLUTION

Impervia – Examination Rooms and Plaster room

High-performance IP65-sealed panel lighting with an array of customisable features.

Luminaries for both the examination and plaster rooms required additional protection and a higher level of general illumination to aid treatment and visual examination.

Ideal for healthcare applications, the Impervia T5 recessed luminaire offered an IP65 rating to ensure increased protection from dirt, dust and water ingress for a more hygienic hospital lighting solution. As the luminaire is sealed to a higher IP rating, staff will incur less risk of contaminating the treatment areas when performing routine maintenance and cleaning.

To achieve the right lighting conditions for each area, the versatile luminaire can be customised further with LM80-verfied LED sources or high-efficiency T5 fluorescent lamps and a wide range of lamp configurations and output packages of up to 11356llm in three different body sizes.

To meet the required 500 lux and uniformity levels for examination and treatment areas, a 4 x 414w T5 version of the luminaire with CAT 2 Louvre optic was provided in a standard 600 x 600mm size to fit the existing ceiling grids. Luminaries were installed with 4000k "cool-white" T5 fluorescent lamps with a higher colour rendering index (CRI) of 90/100 to ensure that clinicians could accurately detect changes in skin tone during examinations in a more natural light.

The popular luminaire can be either recessed or surface mounted to suit the architectural requirements and style of the building. The recessed version used in these clinical areas is suitable for installation into exposed T ceilings, spring T (600x600mm only) as well as plasterboard ceilings.

The Impervia range also offers flexibility in terms of lighting controls with compatibility with High-Frequency, DSI, DALI (LED only), Switch and Bi-level dimming options and a wide range of integral and standalone sensors from Dexsor's Reacta Range. Using these options, luminaries can be customised to not only offer accurate manual dimming but a number of intelligent lighting functions such as daylight regulation and presence detection to maximise energy savings. Internal emergency options are also available with this product.

Emergency

Most luminaries in this project were provided with integral three-hour emergency lighting in either standard, self-test or auto-test variants. With large lighting installations, automatic emergency testing economises on the time, money and the inconvenience of manual testing procedures. All this is offered whilst saving the cost of installing more standalone emergency fixtures.

The automated emergency functions offered by these luminaires include either flashing indicators or user-friendly digital interfaces (for LED variants) that immediately signal any faults and accurately monitor battery life and general status. Whole networks of luminaires can be relied upon to automatically abide to BSEN 5266-1 regulations with little effort and precision, making it easier, less disruptive and cheaper for the busy hospital to maintain. Incorporating automatic emergency functions can greatly increase long-term return on investment as maintenance becomes highly coordinated, efficient and cost-effective.

FEATURED PRODUCTS

MODLED OFFICE

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