



BIZSPACE

LED UPGRADE SLASHES ENERGY
USAGE AND CARBON FOOTPRINT BY
71% FOR BIZSPACE'S REFURBISHED
WIMBLEDON BUSINESS CENTRE

Dextra
LIGHTING

ABOUT THE CLIENT

BizSpace is a national provider of managed workspaces, hiring out everything from offices to industrial units and is dedicated to becoming “champions of Britain’s micro and small businesses; and builders of lively, friendly working communities”. Fuelled by this single-minded passion and energy, the company has since grown exponentially. “BizSpaces” are now everywhere, and come in every shape and size”, catering for a total of 4011 businesses in 98 locations across the UK.

BizSpace’s mission, in essence, is to help today’s SME’s do their jobs better by providing the right work environment, with the right equipment and facilities and most importantly, at the right price. Sustainability and flexibility are therefore at the core of company’s promise to “keep bills down and energy up”, and a carefully planned lighting strategy can tilt the scales of profitability for both BizSpace and its growing clientele.

As part of a broader refurbishment programme launched in early 2017, Dextra Lighting were called in to upgrade the lighting for BizSpace’s South Wimbledon premises. The initial proposal featured a wide range of ECA compliant, precision-engineered LED products and intelligent controls, offering a cut in energy usage of 71% compared to the previous installation, which is equivalent to an annual financial saving of approximately £11,000 and a total reduction of 56,808 kg in carbon emissions. The overall return on investment was further improved by taking measures to reduce installation costs and minimise maintenance by using high-quality LED luminaires.

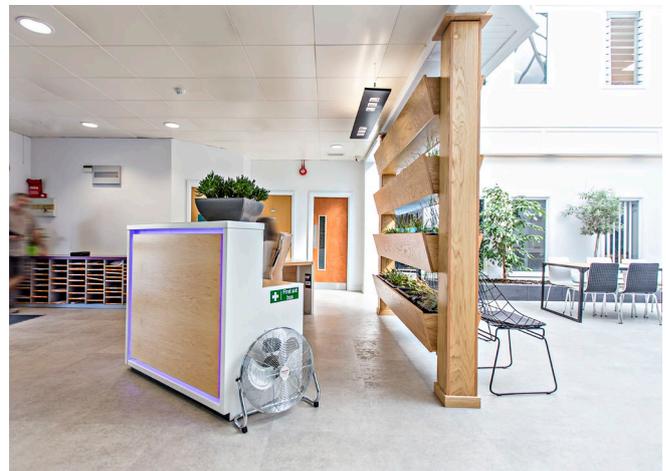
Upon reviewing the potential of upgrading to a sensor-controlled LED system, Matthew Barrell, Regional Operations Manager at BizSpace, noted that: “never before had we considered the true value and benefits of intelligent lighting design and how this may support our business model” and that Dextra Lighting’s “lighting proposition would influence the wider extensive refurbishment programme, which has ensured the ongoing success of our lighting strategy”.

With legislative pressure on small and large businesses to reduce their carbon footprint, switching to LED will improve the green credentials of both BizSpace and its clients, making them more attractive to business partners, investors and customers. Lower carbon emissions will also boost the company’s performance on the government’s Carbon

Reduction Commitment league table for added tax benefits. All these factors will allow BizSpace and the SMEs hiring out their facilities, to be both financially sound and environmentally responsible in their operations.

Total Service - Design to Disposal

Dextra Lighting were involved at all stages of the relighting project from the initial site survey, payback calculations, design and delivery, right through to helping facilitate installation and carrying out commissioning. All end of life fittings were quickly and efficiently disposed of and recycled in adherence to WEEE regulations by Dextra Group’s dedicated award-winning subsidiary, Dextraco. With its vast manufacturing capabilities, a dedicated transport fleet, a registered Approved Authorised Treatment Facility (AATF), experienced in-house designers, specification team and technicians, Dextra Group were able to cater for all of BizSpace’s lighting needs in a fast, efficient and sustainable way with minimal disruptions to their business schedules.



THE BRIEF

Dextra Lighting's challenge was to design a fully compliant lighting solution balancing energy-efficiency and optimal illumination with aesthetic appeal. A combination of newly designed systems and replacement fittings were to be installed across the business centre's 92 units which include offices, workshops, communal spaces, storage areas and amenities, with the aim to improve customer experience whilst keeping overheads and emissions low. The new lighting was to abide to CIBSE guidelines and British Standard regulations to offer the correct lux and uniformity levels in all locations and meet the building's safety requirements.

Operational Efficiency

BizSpaces offer 24 hour access, 7 days a week to allow businesses to work at their own pace and schedules. Reductions in energy consumption therefore, would have a notable impact on the financial and environmental sustainability of the premises, especially with energy prices constantly on the rise. With this in mind, Dextra Lighting made use of its extensive range of LED luminaires and intelligent control solutions to not only drastically cut the lighting's electrical consumption but to adapt to the varying occupancy patterns of workers using the facilities using smart control features. Savings would be made by lowering both the total power load and operating hours throughout the day.

Value for money

The majority of products selected for the project are featured in the government's Energy Technology List, offering eligibility to the Enhanced Capital Allowance scheme for 100% tax relief for the first year of purchase, saving BizSpace a considerable capital sum upon purchase.

Installation was to be kept to a minimum by replacing the existing fluorescent (T8 and T5), halogen and SON fittings on a one-to-one basis in areas where modifying the infrastructure would prove time-consuming and costly. As the majority of Dextra Lighting's products are manufactured with the latest LM80-verified Lumileds 3535 LED sources offering 90% lumen maintenance over the first 60,000 hours of operation, the new installation will require minimal maintenance throughout its lifetime, making it more sustainable to run and avoid disruptions to customers' use of the premises.

Versatility

In addition to automated sensor functions, the luminaires would also feature user-friendly dimming controls to offer customers added flexibility to adjust the lighting to their unique requirements.



“

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THE PRODUCTS

Graduate LED Recessed - Offices & Meeting

Lighting plays a crucial role in creating comfortable and productive working environments. At BizSpace, focusing on aesthetics as well as efficiency was imperative, as this would make the offices more enjoyable to work in and attract potential customers with each viewing.

Achieving the CIBSE recommended light level of 500lux was only the first step in providing the best lighting conditions possible for offices. That is why a BSEN12464 compliant, 5772lm version of the Graduate LED Recessed was supplied from a range of outputs of 2861lm to 7132lm. This output package adheres to the prescribed 3000 candela glare limit and Unified Glare Rating (UGR) 19 while still delivering a high output. The result: brightness, uniformity and visual clarity without producing uncomfortable glare, making it ideal for offices using computers and other VDUs on a regular basis. By combining the latest Lumileds LED sources with a highly efficient prismatic opal extruded diffuser and aluminium white gull-wing reflectors, the Graduate Recessed LED delivers superb light quality at the desired lux levels at an impressive efficiency of 113 luminaire lumens per circuit watt.

Approximately two hundred, 1200 x 600mm luminaires were installed in the offices and meeting rooms, replacing the existing 4 x 36W T8 fluorescent fittings. The one-to-one replacement of the previous fixtures reduced the total electrical load from 36,138w to 9,008w (i.e. from 181.6w down to 50.3w per luminaire), with vastly improved light quality and illumination levels.

The refit was performed quickly and easily as luminaires were provided in lay-in format to facilitate installation into the existing ceiling grid system and the existing connection points were used in their original locations without any additional wiring or modification, saving BizSpace any further expenses.

The Graduate LED range offers compatibility to all mainstream dimming functions and now includes White Tuneable option allowing users to change the colour temperature of the LED source as desired. For the offices, luminaires were supplied with DALI dimming drivers and were networked to standalone Reacta 7 sensors to allow staff to adjust the lighting as required and respond to occupancy patterns and daylight levels throughout the day to optimise lux levels and maximise energy savings.



Dual LED - Circulation Areas / Meeting Rooms

Customised with various output packages and luminaire sizes, the Dual LED recessed luminaire reinvigorated the corridors and meeting rooms with an improved light quality and attractive contemporary design. Its twin high-transmission opal diffusers exploit the full potential of its 3535 HE (high-efficiency) Lumileds LED chip board, producing a bright, yet controlled light with a wide and uniform distribution. The combination of highly efficient optic design and premium LED sources offers vast improvements in light quality at an efficiency of 118 luminaire lumens per circuit watt, using half the power of the previous T5 fluorescent lighting. 2772lm and 5552lm versions of the Dual LED replaced the existing fifty-five T5 panel lights on a one-to-one basis, reducing energy consumption from a total of 3,143w in all the selected areas, down to a staggering 1,564w. To add to these energy savings the luminaire was installed with a DSI dimmable driver and an integral Reacta 44 sensor offering both presence detection and daylight regulation, allowing for additional energy savings of up to 30% depending on the application and location in which it operates.

Lay-in versions of the luminaires were supplied in both 600 x 600mm and 1200 x 600mm sizes to offer full compatibility to the existing ceiling system. Installation was made simpler and quicker thanks to its lightweight and slim line construction, making luminaires easier to handle and position into the ceiling grid systems and no major rewiring or structural modifications were required.

Comtec LED / Protec COB LED - Reception, Lobby & Circulation Areas.

To help create the right first impression and welcome customers into the building, the Comtec LED was supplied in a 2000lm version from a range of output packages, with its efficient LED source producing a "cool-white" C84 (4000k) colour temperature for a fresh and comfortable quality of light. Luminaires were customised with a decorative drop glass ring to add a stylish touch to the surroundings, blending in with BizSpace's choice in decor and corporate theme.

The Comtec LED 210mm diameter matches the typical cut out size of fluorescent or HID downlights and was chosen to facilitate a one-to-one refit. The luminaires were effective replacements for the existing 30w CFL Halogen downlights, offering the cutting-edge performance of the latest Lumileds LEDs combined with highly efficient reflectors for LORs of over 90%. As a result, the installation reduced the power load from 50w to 10w per fitting, improved light quality to the required 300Lux for the area and minimised installation and future maintenance costs for BizSpace.

Compatible with a range of dimming options and standalone sensors, the Comtec LED was supplied with a dimmable DALI driver working in conjunction with Reacta 7 passive infrared sensors; offering accurate manual control via a practical 7 button wall switch with occupancy detection and daylight regulation. Staff now have the benefit of both manual and automatic lighting controls that will ensure optimal light levels throughout the day whilst maximising energy savings.

Other downlights across the premises were replaced with the 10w Protec COB ("Chip on Board" luminaire, reducing electrical consumption by approximately 80% compared to the existing 50w GU10 Halogen fittings. The versatile luminaire can be customised with a variety of body formats including: fixed bezel, gimbal and drop glass - all of which are available in either white or brushed chrome finishes. The Chip on Board LED version (also available in GU10 and Halogen variants) features a robust steel housing and die-cast aluminium front bezels, offering IP65 and fire-rated protection making it adaptable to the demands and compliance criteria of a wide range of environments. Other options include two beam angles and a wide range of colour temperatures, giving designers full flexibility to tailor installations to the exact requirements of the application. To meet BizSpace's lighting specifications, brushed chrome luminaires were supplied in a 36 angle in a C85 and C84 colour temperatures.

A network of thirty-three fixed output LED downlights are now controlled by standalone Reacta 7 passive infrared sensors to offer a bright out function which dims the lighting to 10% of the maximum output when there is enough daylight or if areas are vacated. This smart control system will ensure continued return on investment and minimise the company's carbon footprint over the course of the system's lifetime.

The Protec COB range is also designed for flexible and simplified installation with a hinged back terminal block for easy access for wiring and practical spring clips that fix to the back of the ceiling with minimal effort. These features allow the luminaire to be installed in either plasterboard, mineral fibre or metal tile of varying thickness.

THE PRODUCTS

OPUS LED - Atrium

Due to the atrium's impressively high ceiling with its array of skylight windows and large floor space, a different design approach was adopted. A single OPUS 2 LED floodlight, usually used for outdoor applications, was installed, carefully positioned to offer full coverage of the hall. Thanks to the wide distribution offered by its symmetrical reflector and higher band of output packages of between 2,615lm to 24,426lm, the luminaire was supplied in a large (four sizes are available with this product ranging from Small to Extra Large) 9037lm version; comfortably achieving optimal lux levels for the area with maximum uniformity throughout. The 69.9w version provided, delivers LORs of over 85%, and operates at an impressive efficiency of 120 Llm/w; offering a total reduction in power load of 86% compared to the previous 500w halogen lighting. An asymmetric distribution is also available with this range, offering compliance to Zone 2 of external lighting regulations.

Luminaires were installed using lift access equipment, but once fitted the OPUS 2 LED, with its highly efficient, low-maintenance source, will ensure that BizSpace avoids the expense of regularly calling out external contractors to service the luminaire at such inconvenient heights. Compared to the previous halogen lighting, the fit-and-forget luminaire will not only offer significant energy

savings but minimise the time and labour involved in frequently replacing failed or depreciating lamps. For further reductions in maintenance costs, the luminaire's Philips/Tridonic driver offers a Constant Lumen Output function that gradually increases the voltage to offset the LED sources depreciation over time to ensure optimal light levels are always met. This saves the time and money to replace underperforming lamps, a problem common to HID or fluorescent alternatives. The luminaire is built to withstand the rigours of the outdoors, with a sturdy, fully gasketed IP65-rated steel construction with toughened glass cover.

By incorporating intelligent lighting controls in the form of the Reacta 37 photocell dimming sensor (standalone) and a DSI dimmable driver, the luminaire will harvest the natural light from the skylights. Dextor's high-level sensor can be mounted at heights of up to 12m to provide full detection for the atrium. Sensor functions can now be digitally programmed from ground level using the user-friendly RE-EAP remote control

The OPUS LED also replaced the external 400w floodlights in the car park, offering improved illumination compared to the characteristically dim orange light produced by SON fixtures with a 40% reduction in energy consumption and minimised maintenance.

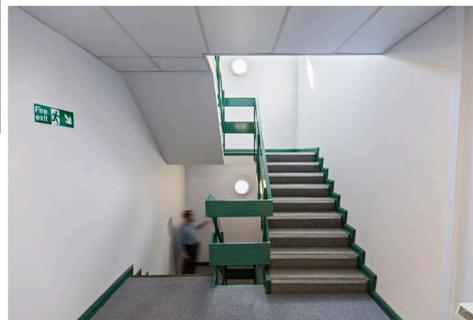
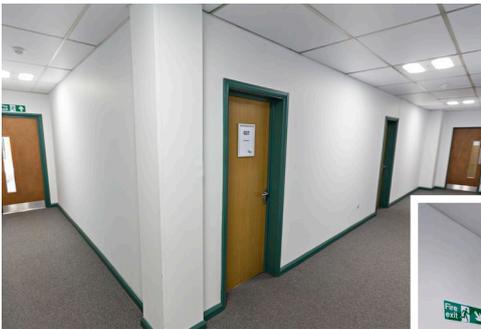


THE PRODUCTS

Hydra LED & Ecopack LED - Storage / Workshops

Dextra's range of high-performance LED batten luminaires were selected to replace the existing T8 tube lighting in BizSpace's storage areas and workshops. These precision-engineered luminaires are designed to make LED refits as quick, easy and cost-effective as possible, improving return on investment by keeping energy, maintenance and installation costs to a minimum.

The lighting for the storage facilities needed to prioritise energy-efficiency and durability. That is why the IP65-rated Hydra LED was installed, offering the premium performance of its Lumileds LED source and highly efficient optic to deliver a high LOR of 90% for maximum visibility at an efficiency of 140lm/W. Available in outputs ranging from 2046lm to as high as 18,630lm across three different sizes in either twin or single body formats, the versatile luminaire was customised to provide optimal light levels and energy-efficiency for rooms of varying dimensions, cutting energy costs by a total of 64% compared to the previous fittings. Its LM80 verified LED chips offer 90% lumen maintenance for the first 60,000 hours of operation which is double the highest quality T8 fluorescent tube lamps - thereby halving the maintenance costs and inconvenience involved in replacing faulty or failed lamps. The Hydra's durable glass reinforced polyester housing and steel gear-tray offer IP65 rated protection to the dirt and dust that rapidly accumulates in industrial storage areas as well as providing increased resistance to light impact and a wider temperature range.



The luminaire's versatility extends to both lighting control and installation. With compatibility with Switch Dim, DALI, HFR 1-10v Analogue and DSI dimming and a selection of standalone sensors from Dextra's Reacta range the Hydra LED offers a wide choice of control options to suit each application. A White Tuneable dimming option is now also available with this range which allows the colour temperature of the LED source to be adjusted as desired. The luminaire is suitable for surface mounting, mounting to trunking and suspension to suit a variety of ceiling types.

The sensor-controlled Ecopack LED luminaire on the other hand, offered quick and easy replacement of the old fluorescent lighting with its matching footprint to typical T8 fluorescent battens. Technicians only had to set up live, earth and neutral connections without the need to modify external wiring or install a BUS system for a time and cost effective installation. The fitting process was simplified further by means of its two-part construction, which allows the rear spine to be mounted before electrical connections are made and its one-piece gear tray and diffuser to be snapped into position with minimal effort. In other words, the Ecopack LED saved BizSpace money before the luminaires were even switched on.

With the aid of its high-transmission curved opal diffuser and high-quality Lumileds LEDs, the luminaire operates at a high LOR and an efficiency of up to 141lm, offering superb light quality at a fraction of the power consumption of its fluorescent counterparts. The versatile luminaire is available in a wide range of options including, outputs between 1933lm and 8484lm across four body lengths, and three optic designs to suit different ceiling heights and room sizes to ensure each installation is just right for the application. Luminaires were supplied and installed in both 3062lm and 7920lm output versions in 1500mm and 1800mm to provide optimal light levels and uniform distribution for each unit.

THE PRODUCTS

Hydra LED & Ecopack LED - Storage / Workshops cont...

To allow for maximum lighting control and efficiency, the Ecopack LED is available with all mainstream digital and analogue dimming functions (White Tuneable also available) which can be combined with a wide range of integral sensors offering daylight regulation, presence detection, bright-out and corridor mode allowing each installation to be adapted to the working schedules of each business and harvest daylight savings where possible. The luminaires can now be easily commissioned from ground level using the REA-AP remote control to suit the customers' daily requirements. The sensors themselves can be customised using a selection of lenses to ensure the correct detection range suits the room size and ceiling height. As the sensors are incorporated into the luminaire itself the customer did not have to use a separate BUS wire to link the sensor to the luminaire.

The majority of the luminaires featured in this project offer a number of integral emergency lighting options including self-test and auto-test functions. Selected luminaires were supplied with standard 3-hour maintained emergency lighting and were positioned in strategic positions in compliance with BS 5266 safety regulations. All Dextra Lighting LED products are covered by a comprehensive 5 year warranty for additional peace of mind and first-class aftercare support beyond purchase.



If you're reading this you're a bit different.

Some combination of guts, brains and balls has turned you into a person with a business card, a Company House logo, and a disproportionate share of long hours and sleepless nights. Whether you're just starting up or you've been playing your trade for years, we're here to shake the highs, ease the lows and smooth your path to survival/world domination any way we can.

FEATURED PRODUCTS



✓ ECA

GRADUATE LED RECESSED



✓ ECA

COMTEC LED



✓ ECA

PROTEC LED



OPUS 2 LED



✓ ECA

HYDRA LED



ECOPAK



✓ ECA

DUAL