

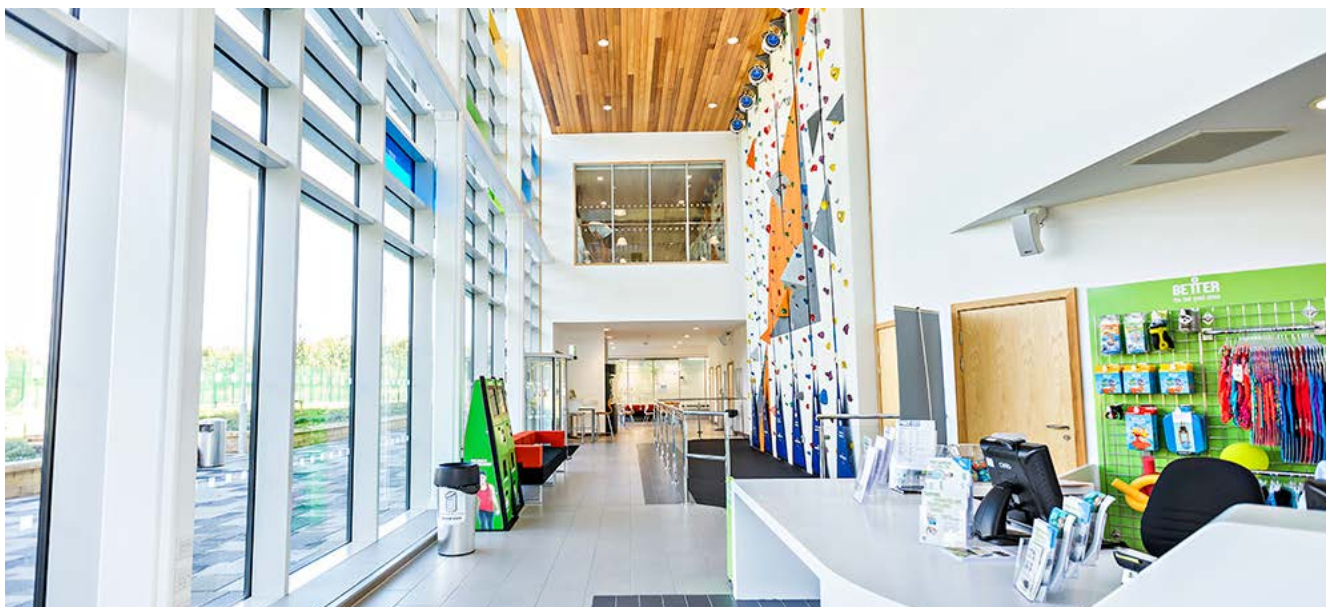
WORKINGTON LEISURE

WORKINGTON'S BRAND-NEW
SPORTS FACILITY KITTED-OUT WITH
HIGH-EFFICIENCY LED SYSTEM

Dextra
LIGHTING

ABOUT THE CLIENT

Workington's brand-new leisure centre is due to open the public at its new location, with Dextra Lighting's precision-engineered LED luminaires and digital lighting controls, to provide a sustainable and safe sports environment for the people of Allerdale.



With the development plans and new location approved, 1.5m from Sport England and 1.5m from Allerdale Borough Council were poured into creating a state-of-the-art leisure centre to replace the Brow Top facilities in Moorclose, Cumbria. With a total budget of 11.3m, the design for the new building was set to a high-specification, with the lighting expected to deliver future-proof standards of energy efficiency and performance.

WHY LED AND INTELLIGENT CONTROLS?

LED systems and advanced lighting controls offer the simplest and most immediate solution to achieve these objectives, with potential savings of up to 60% compared to conventional fluorescent lighting, and an extra 30% when sensor-controlled. The cost-effectiveness of LED extends beyond generating energy savings, as high-quality sources, such as the 3535 Lumileds LEDs featured in the majority of Dextra Group LED products, offer 90% lumen maintenance for the first 60,000 operating hours, avoiding the costs of frequent lamp replacements.

With these significant reductions in energy consumption, buildings inevitably become more sustainable and their reduced carbon footprint can also result in financial benefits from government-sponsored programmes such as the CRC scheme, and offer access to funding channels promoting the use of energy-efficient technology.



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WHY DEXTRA GROUP?

Nationwide suppliers, Edmundson Electricals Ltd selected Dextra Lighting for its extensive range of LED luminaires designed specifically for sports applications, offering beyond compliance levels of energy-efficiency. Over the years, Dextra Lighting has built a strong reputation catering for sports establishments across the country, which has allowed its in-house design team to develop products and understand the exact requirements of this sector.

With its vast manufacturing and design capabilities and own transport fleet, Dextra Group has kept an edge of competitors to deliver these bespoke solutions within extremely tight delivery schedules.



THE BRIEF

The lighting had to ensure that all sports and activities could be performed safely with maximum visibility and comfort. Luminaires and controls were to be installed in a wide range of locations including:

- 90-station gym
- Studios
- Sports hall
- Changing rooms

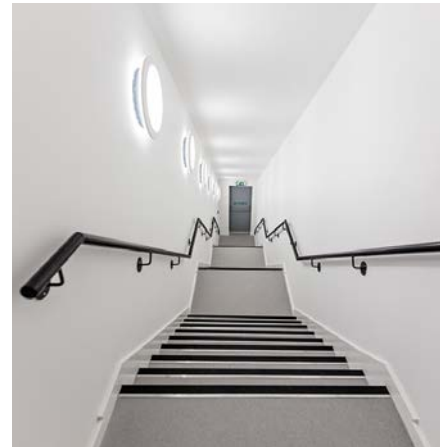
BS EN 12193 lighting class II lighting requirements had to be observed, concerning sport-specific light levels, glare control, uniformity of light, and high colour rendering for an optimal sporting or training experience.

Luminaires and visible control gear would need to offer suitable protection depending on the sports activity and environment.

All fixtures were required to provide easy and safe access for maintenance purposes, so that the installation can be kept in full working order with minimal disruptions, costs and no danger to staff.

Emergency lighting had to follow safety recommendations from relevant sports governing bodies, whilst user-friendly and accurate dimming functions were also essential to allow staff to easily adjust light levels and distributions for different activities.

An attractive modern aesthetic was to be maintained throughout the premises to appeal to the public and match the state-of-the-art equipment and facilities provided by the centre.



THE PRODUCTS

Sports Hall – Prosport LED

With ceiling heights of over 8m and narrow windows, the sports hall would rely on powerful artificial lighting to support a range of sports such as 5-a-side, badminton, rollerskating parties, basketball and netball.

To deliver maximum power, flexibility and energy efficiency, the Prosport LED was installed in a high output version of 34,500lm from a range of lumen packages, with DALI dimming controls to provide adjustable lighting up to the recommended maximum of 500lx for sport halls. At this output, luminaires could be configured using the most efficient spacings, to provide optimal vertical illuminance and uniform coverage, giving players maximum visibility of fast moving objects such as balls or shuttlecocks.

The Prosport LED's optics are designed to boost the efficiency of its high-quality Lumileds LED source offering LORs of over 80% and an overall efficiency of 140lm/w. The two part system consists curved clear polycarbonate diffusers and an LED shield to provide a broad, bright, yet controlled distribution of light.

The luminaire was supplied with a versatile symmetrical optic to provide an ideal light distribution for sports such as football, basketball and netball. An optional asymmetric bracket is also available with this range, providing angled lighting for court lighting; eliminating disturbing glare when players look upwards.

The Prosport is engineered to provide durability, protection and aesthetic appeal to modern sporting venues. Its robust steel housing and reinforced injection moulded polycarbonate end caps, and diffusers provide suitable protection from ball strikes, whilst its angled design minimises the risks of projectiles being trapped at the rear of the luminaire. Unlike HID or fluorescent alternatives, the absence of fragile lamps eliminates the risk of shattered lamps on impact.

The Prosport LED requires minimal maintenance thanks to the long-life and reliability of its 3535 Lumileds LEDs. For sports hall applications, this offers a significant advantage to fluorescent counterparts, as regularly servicing luminaires at such high ceilings is costly, time-consuming and disruptive.

The Prosport range is designed for flexible installation by offering suitability for trunking and surface mounting, as well as rigid suspension which offers extra resistance to ball strikes. The installation process was kept quick and cost-effective by supplying all luminaires with a zintec mounting spine and prewired cable.

By combining energy-efficiency, low maintenance and quick installation, the Prosport LED has guaranteed a fast and substantial return on investment for Allerdale council.

Due to the multi-functional purpose of the hall, luminaires could be easily and immediately programmed at different settings via the user-friendly RE-AP remote control from ground-level, to suit each sport or event.



THE PRODUCTS

Fitness Studios – MODLED Slim, Discalo LED

The MODLED Slim recessed luminaire, was used in studios with lower level suspended T ceiling systems and was supplied in a 4500 lumen package designed specifically for new build applications, to minimise energy consumption and capital cost of installation by providing maximum luminaire spacings.

The luminaire uses a high-transmission polycarbonate diffuser panel offering 93% transmission of its Lumileds LED source, LORs of 85% and increased visual comfort. These highly efficient optics and LEDs allow the luminaire to operate at an average of 120Llm/w in outputs ranging between 1750Llm/w to as high as 15,200lm, to suit a wide range of applications.

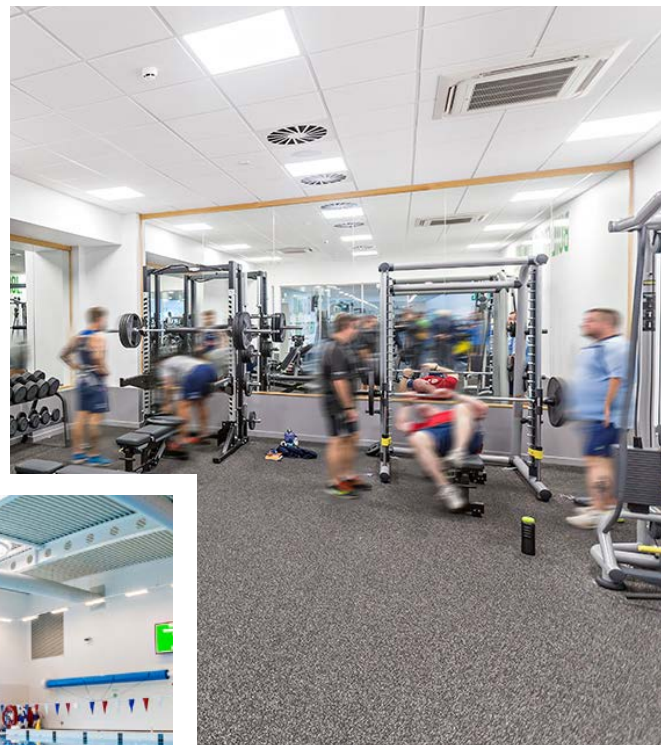
The MODLED Slim provided the recommended 400lx for high-intensity and often supervised workout sessions in the weightlifting gym without compromising on visual comfort. A lower 300lx was required in the other areas such as the cycle studio and practice hall used for a variety of fitness classes.

Designed with versatility in mind, the MODLED Slim is also available in a wide range of dimming, sensor, and emergency options, 3 different sizes, and is suitable for either lay-in or pull-up installation. The ECA and L2 compliant luminaire can also be supplied in a BSEN 12464 compliant version fulfilling the specified 3000 candelas per sq.m glare limit.

More directional downlighting was provided in the larger 90-station gym studio, featuring treadmills and cross-trainers, with the attractive and efficient Discalo LED architectural downlight, providing localised lighting at an average of 300lx, from above each workout station.

The selected luminaires offer an appealing minimalist design that harmonised successfully with the centre's modern interior design, and all lighting was provided with "cool white" 4000k LED sources to help maintain a fresh and vibrant workout environment for users.

For areas with ceilings requiring surface mount installation, the efficient Graduate Surface LED was supplied in a range of lumen outputs.



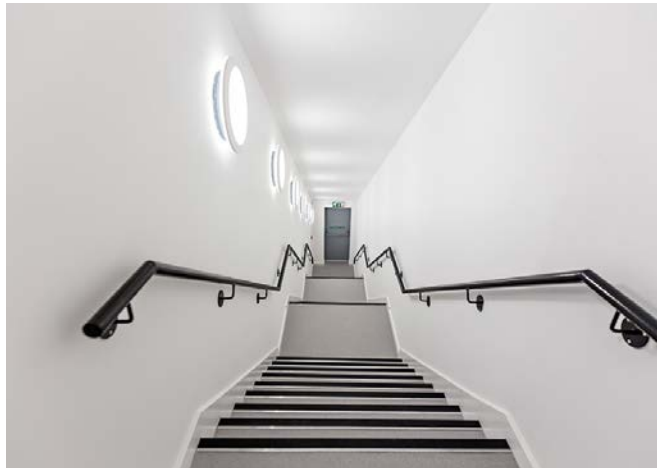
THE PRODUCTS

Emergency Lighting

In all locations, over half the luminaires were supplied with integral auto-test emergency lighting which allows the entire network luminaires to be monitored automatically via a DALI (Digital Addressable Lightning Interface) operated system. Maintenance staff will be able to receive periodic reports of any faults via a user-friendly digital interface. The practical system will help ensure the installation is kept fully functional and safe at all times whilst avoiding the costs of calling specialised technicians to perform tests.

To support the integral emergency functions of these luminaires, the highly efficient and durable Highspot LED emergency luminaire was installed in strategic locations. Its 500 lumen output is intended for high level applications or where very wide spacings must be achieved, such as the sports hall and the main pool area. Available in 3 lens types, the luminaire was supplied in both an Open Area and Ultra High Rack version, to optimise the light distribution to each location. The Highspot LED was also linked to the auto-test system.

With the leisure centre due to open later this month, we look forward to receive feedback.



FEATURED PRODUCTS



MODLED SLIM



PROSPORT LED



GRADUATE SURFACE
LED



DISCALO LED



HIGHSPOT LED