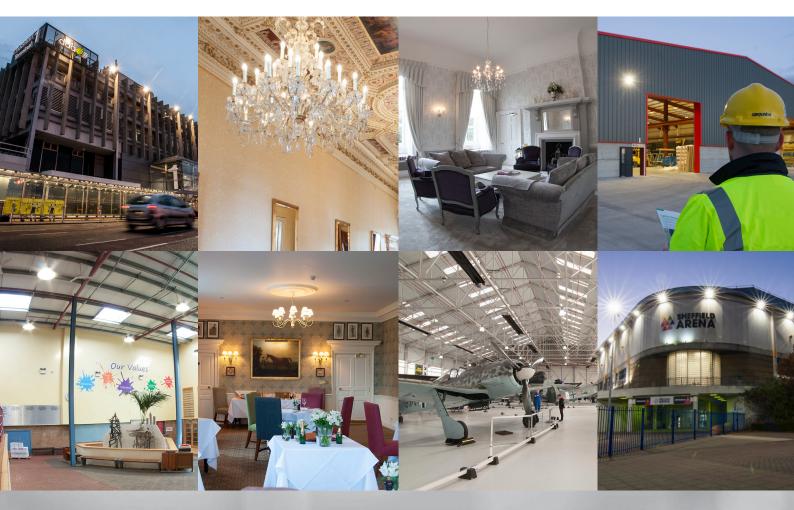


British Electric Lamps Ltd

Lighting Case Studies





Case Study Rotherham College

Thomas Rotherham College was formed as a Sixth Form College in 1967 but its origins date back to 1483 when what became Rotherham Grammar School for boys was founded by Thomas Rotherham, a local scholar who had risen to be Archbishop of York, Chancellor of England and Chancellor of Cambridge University.

Mark Lewis, Electrical Engineer at Lilleker Bros Ltd said: "I was asked by the head of the Facilities Management team at Thomas Rotherham College to see what could be done in the canteen/break out area. Their lighting at the time was 34 x 70W HQI (2,380W) these were replaced with 9 x 180W LED Lowbay fittings (1,620W). The quality of the light was poor due to low light levels, it was also expensive to run with the added disadvantage of frequent lamp/ballast failures.

I contacted Bell who offered an LED Solution including; Lowbays, Aqua & Deco fittings which reduced the quantity of fittings, minimised the running costs, improved the light level and atmosphere. The Head of FM said he was *Over the moon with the result.*"

- Over the life of the fittings Thomas Rotherham College could save £5376 in energy costs Energy Saving 34%
- Annual Energy Saving 2796kWh / Annual CO₂ Saving 1565kg / Annual Maintenance Saving £600





Royal Bournemouth Hospital

A Kaleidoscope of Butterflies

BELL were delighted to be a part of the Organ Donation Commemorative Artwork that was recently unveiled at The Royal Bournemouth Hospital.

Organ donation is critically important to help preserve life. In 2014/15 4431 people in the UK had their lives saved or improved by an organ transplant, The Royal Bournemouth Hospital have decided to pay a fitting tribute to organ donors. With the current consent/ authorisation rate below 60% they also want to raise awareness of the importance of organ donation.

As part of their design they had many technicalities to decide on, one of which was to choose lights that will show up every section of the sculpture magnificently. To meet this criteria they chose Bell LED Classic GU10's with a 6500K (daylight) colour temperature.

These lamps illuminate the design and enhance the shimmer of each butterfly for maximum effect, and with their 30000 hour lamp life they are maintenance free.

- Over the life of the lamps The Royal Bournemouth Hospital could save £1267 in energy costs compared to halogen lamps.
- Energy Saving 88% Annual Energy Saving 1,794kWh Annual CO₂ Saving 1,005kg Annual Maintenance Saving £650





Case Study Sheffield Arena

Skyline PRO Floodlights, 100W and 200W were installed at iconic entertainment venue Sheffield Arena.

Opened by Queen Elizabeth II on 30 May 1991, the first concert took place that evening - Paul Simon. The Arena hosted the Gymnastics for the 1991 World Student Games, has been the home venue for Sheffield Steelers Ice Hockey and some of the biggest names in music, stage and screen have performed there.

Alan Grantham Arena Electrical Engineer said: "It was time to change our inefficient Metal Halide lighting, the old lamps needed frequent replacement with the associated high maintenance costs. After extensive research the Bell units fitted the bill perfectly, offering a bright crisp light to illuminate public areas which is essential for the safety of our customers.

The cost savings will be substantial, the initial outlay will be recovered quickly with the added benefits of reducing energy consumption and our carbon footprint. With this new lighting we can forget about needing to change lamps for many years."

• Over the life of the lamps Sheffield Arena could save £84,240 in energy costs • Energy Saving 60%

Annual Savings: Energy 24,336kWh / CO₂ 14,452kg / Maintenance £3,900





Case Study RAF Museum Cosford

BELL Illumina 150W High Bay Fittings selected for museum.

Over 70 aircraft of international importance are housed within three Wartime Hangars and the award winning National Cold War Exhibition at this prestigious museum. In 2007 the £12.5 million National Cold War Exhibition was opened at Cosford by Her Royal Highness Princess Anne. This landmark building truly has the 'wow' factor with its eye catching architecture and design.

RAF Museum Cosford representative said: "Fifty three Illumina LED High Bay fittings were installed, these come with a lifetime of 50000 hours, and a 5 year guarantee. The previous fittings were old, inefficient and power hungry with the added disadvantage of a warm colour temperature which created a distracting colour cast on the exhibits. The Illumina's cool white output is ideal for the museum and highlights the aircraft perfectly, the quality of light is superb. Now these Illumina units have been installed we can forget about changing fittings and the associated costs and inconvenience for a considerable time."

- Over the life of the lamps RAF Museum Cosford could save £31,800 in energy costs
 Energy Saving 40%
- Annual Energy Saving 23,150kWh / Annual CO₂ Saving 12,964kg / Annual Maintenance Saving £500





Case Study Western Building Systems

BELL LED Floodlights and High Bay's were specified to illuminate the new Western Building Systems distribution warehouse, due in no small part to their proven quality of light, long service life, energy efficiency and maintenance free operation.

Shane Wylie, Main Contractor said:

"Recent growth has seen the need for Western Building Systems to relocate to larger premises, we took the opportunity of supplying state of the art LED fittings from BELL Lighting.

The new units produce a crisp, even light with no fall-off ensuring a safe working environment for employees. Cost savings will be substantial, the initial outlay will be quickly recouped with the added benefit of reducing the environmental impact."

ullet Over the life of the lamps Western Building Systems could save £28,000 in energy costs ullet Energy Saving 40%

Annual Savings: Energy 20,996kWh / CO₂ 11,741kg*



* When compared to 250W Metal Halides



Case Study Dolyhir Quarry Workshop

BELL fittings chosen for Lafarge Tarmac Dolyhir Quarry, Wales.

Lafarge Tarmac Dolyhir and Gore Quarries have a long history of mineral extraction, dating back over 100 years supplying aggregate asphalt and minerals. The site has high safety and environmental standards which is one of the reason BELL High Bays were recently installed at Dolyhir workshop. Previously 400W & 200W Metal Halide fittings were used which were very expensive and had a high failure rate.

Metal Halides have the added disadvantage of 5 minutes warm up time. When a Metal Halide lamp failed a cherry picker had to be utilised to change the lamp, this meant closing the workshop which wasted time and money.

Shane Middleton of Lafarge Tarmac said: "I am delighted with our new BELL 200W High Bay units as they are instant start at the flick of a switch. Easy to fit and offer zero maintenance, the light output from them is fantastic, and after trying many other units they are the best I have found". The units each produce 18000 lumens along with a superior life of 50000 hours.

- Over the life of the lamps Dolyhir Quarry will save £8250 in energy costs Energy Saving 53%
- Annual Energy Saving 861.12kWh Annual CO₂ Saving 2,893kg Annual Maintenance Saving £360





Case Study The Gym, Southampton

Illumina High Bay helps The Gym members workout

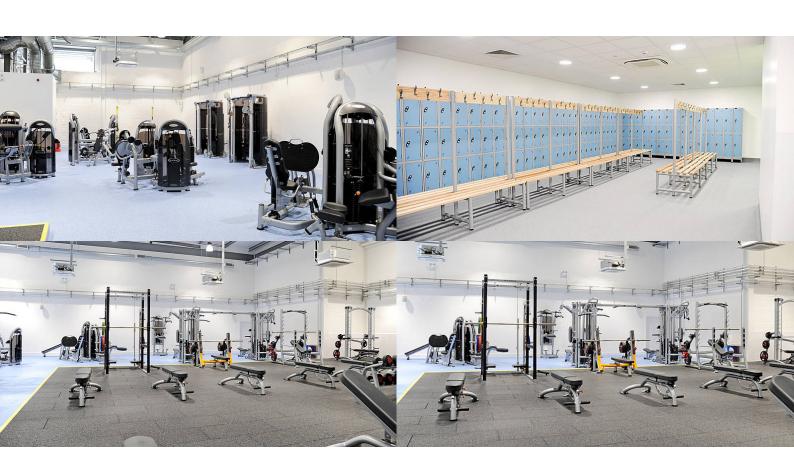
The Gym recently opened its latest fitness facility in Southampton, 55 Illumina LED High Bay fittings were specified and installed. These units are suitable for both High & Low Bay applications, have a lifetime of 50000 hours, colour temperature of 4000K and are offered with a 5 year guarantee.

The Gym offers a lighter, more uplifting fitness environment, due in no small part to the BELL High Bay LED lamps which produce a quality, even spread of light while saving energy and reducing environmental impact.

Victoria Mills of The Gym said: "We are open 24/7 so we need lighting that is both reliable and has a long life, the BELL Illumina units deliver on both. With a light output of 17500 lumens the gym is bathed in light helping our members have a great workout.

• Over the life of the lamps The Gym will save £33,000 in energy costs • Energy Saving 40%

Annual Savings: Energy 48,048kWh / CO₂ 26907kg / Maintenance £420





Case Study Metrodent, Huddersfield

LED ECO Panels & T8 Tubes were installed at Huddersfield-based Metrodent, a successful manufacturer and distributor to the dental industry.

After a site survey to assess upgrading Metrodent's office and warehouse lighting BELL Eco panels & T8 tubes units were chosen. These units have a payback period of two years, furthermore, the life expectancy of the new lighting is 50000 hours and maintenance costs are also reduced, and bearing in mind the rising cost of electricity, Metrodent's savings will continue into the thousands over the years.

Ian Lait, Sales Director for Metrodent Ltd, commented:

"Our existing lighting was old and made up of mainly fluorescent tubes which are power hungry, the new lighting is modern LED technology which consumes roughly two thirds less energy."

The greatest unforeseen benefit is the vast improvement to our working environment and I must admit I had no idea of the difference the LED lighting would make! The quality of light is superb, it feels like we have been working in the shade for years, it is not often you get more for less but we have more light and the electricity bill is 60% lower."

• Over the life of the lamps Metrodent will save £60,060 in energy costs • Energy Saving 56%

Annual Savings: Energy 28,274kWh / CO₂ 15,834kg / Maintenance £1200





Case Study ROHO, Heckmondwike

LED T8 Frosted Tubes were installed at Robin Hood Watersports Heckmondwike, a leading retailer of watersports and diving equipment, kayaks and paddleboards.

Previously ROHO had a mixture of old inefficient fluorescent tubes of varying sizes, some of which were obsolete. When it was decided to upgrade to efficient LED units British Electric Lamps fittings were specified, the new LED fittings not only save money but have a positive impact on the environment.

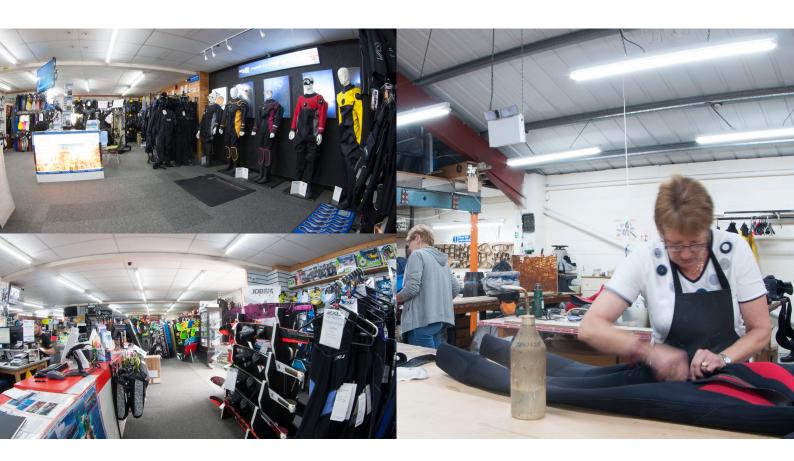
The new fittings provide clean, crisp lighting, ideal for the retail environment, along with a high Colour Rendering Index (CRI) which ensures the brightly coloured ROHO products are displayed to their full potential. Lamps with poor CRI will distort some colours which may mean you end up with a green sock when you wanted brown.

Sally Findlow for ROHO said:

"I am delighted with the new lighting, it has given a real boost to our retail space, customers can now view our products in a attractive, well lit welcoming environment".

• Over the life of the lamps ROHO will save £19,439 in energy costs • Energy Saving 62%

Annual Savings: Energy 8,498kWh / CO₂ 4,759kg / Maintenance £360





Case Study Dublin Airport

Bell fittings specified for Dublin airport

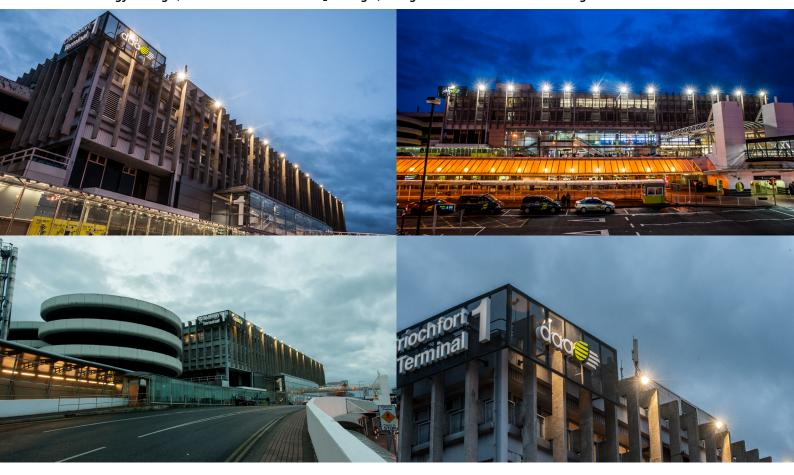
2015 saw a fantastic new change at Dublin Airport. BELL 200W Skyline Pro fittings were installed, illuminating the entire Departures Section of Terminal 1!

Dublin Airport is one of the latest commercial buildings to benefit from our 200W Skyline Pro LED Floodlights. Twelve units were recently installed, each Skyline Pro produce an impressive 22000 lumens and have a superior life of 50000 hours.

With Dublin Airport open 24 hours a day, 364 days per year, catering for over 20 million people per annum, as you can imagine, there is very limited time for maintenance. Frequently replacing floodlights on top of a busy terminal would not only cause disruption to passengers but would also come at a great cost.

Over a short 1 year period, Dublin Airport will save approximately €2740. With a given life of 50000 hours, the cost saving will be substantial:

- Over the life of the lamps Dublin Airport will save €20,700 in energy costs Energy Saving 53%
- Annual Energy Saving 1,255.80kWh Annual CO₂ Saving 8,439kg Annual Maintenance Saving €600





Case Study RTD Crawford

BELL Illumina fittings were recently installed at RTD Crawford the largest distributor of imported timber in Ireland with one of the most up-to-date milling facilities in Europe.

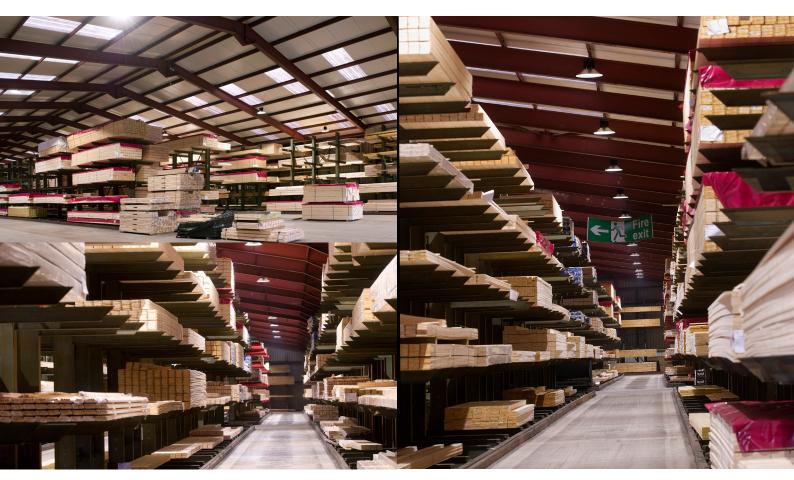
After a site survey to assess upgrading RTD Crawford warehouse lighting and subsequent lighting design scheme, Illumina 150W High Bays were specified. These units offer 17500 lumens, and are a genuine replacement for 400W Metal Halides, with a life of 50000 hours, and maintenance free operation.

Tom Beacom Electrical Contractor said:

"In addition to the huge savings in money and energy, the Illumina units offer complete piece of mind with the 1 year on-site warranty. The quality of light is superb, I am sure the employees feel they are working in a safe, well illuminated environment".

• Over the life of the lamps RTD Crawford could save £45,000 in energy costs* • Energy Saving 63%*

Annual Savings: Energy 32,760kWh / CO₂ 18,346kg* • Annual Maintenance Saving £2765.00*



* When compared to 400W Metal Halides



Case Study Forge Engineering Services

BELL Illumina High Bay units were chosen to replace old, inefficient Metal halide lamps at Forge Engineering Services, Dungannon.

Forge Engineering Services MD said:

"The new fittings are a revelation, they start at the flick of a switch, and we are not constantly having to replace the old inefficient Metal Halide lamps. Working conditions have improved tremendously along with saving energy, money and reducing our carbon footprint. Everyone comments on how bright the workshop looks in comparison to the old lamps".

• Over the life of the lamps Forge Engineering Services could save £9600 in energy costs* • Energy Saving 50%*

Annual Savings: Energy 6989kWh / CO₂ 3914kg* • Annual Maintenance Saving £400*



* When compared to 400W Metal Halides



Case Study Hickie's Bar & Pier Restaurant

Situated in the heart of the seaside town of Kilkee Ireland. Established in 1883, this boutique Victorian Bar & Restaurant has a warm welcoming atmosphere that combines a traditional feel with modern facilities.

A recent redesign from Interior Architects tess-stanford.com has seen a total transformation that now includes sophisticated lighting and relaxing furniture throughout. BELL Lighting's LED Vintage Range of lamps were specified throughout the refurbishment, resulting in flawless mood lighting throughout the restaurant, bar & snug.

Choosing to install LED Lighting rather than inefficient incandescent technology will result in a 90% reduction in energy costs and a saving of £1500 for Hickie's over the life of the lamps.

Hickie's representative said: "We are delighted with the new lamps which help to create a warmer more inviting interior.

Nautical rope lights combined with the Bell Vintage LED lamps feature throughout and reaffirm Hickie's connection to the sea.

With 15000 hours life these lamps are almost maintenance free, the smooth dimming and authentic vintage look is perfect."

- Over the life of the lamps Hickie's could save £1,490 in energy costs Energy Saving 90%
- Annual Energy Saving 3,617kWh / Annual CO₂ Saving 2,025kg / Annual Maintenance Saving £600





Case Study Moor Park Golf Club

4W dimmable candles were installed at Moor Park Golf Club, Hertfordshire.

The Mansion is set amidst 300 acres of mature woodland, the magnificent building with its impressive grounds is an awe-inspiring venue for any occasion. BELL candles were chosen for this prestigious project for their A+ Energy rating, 30000 hour life, consistent colour and smooth flawless dimming.

Josh Connolly, Facilities Manager said:

"Our previous incandescent lamps were inefficient and needed constant replacement, no small task on chandelier's suspended from a 20 foot ceiling in the Banqueting Hall. The new LED lamps are maintenance free, they are 'fit & forget', have clear, crisp light output to illuminate the hall from floor to ceiling. Members and guests have commented on the ceiling detail they hadn't been able to see with the previous incandescents.

These have been so successful we intend to replace all our lamps with BELL units, when the roll-out is complete the money and energy savings will be huge".

• Over the life of the lamps Moor Park will save £30,462 in energy costs • Energy Saving 93%

Annual Savings: Energy 16,307kWh / CO₂ 9,132kg / Maintenance £1000







Case Study Talbot Hotel, Malton

Bell 4W LED candles, a large proportion being from the Vintage range were supplied by AB Electrical, as part of a lighting solutions scheme for The Talbot Hotel, Malton, North Yorkshire.

An initial trial batch of lamps were supplied, these were so successful that the lamps were rolled out to all communal areas, 26 bedrooms, banqueting halls and business meeting rooms.

Talbot Hotel spokesperson said: "We are delighted with the new lamps, in addition to the cost savings we now enjoy, the lamps fit perfectly with the existing fittings helping to create a friendly, welcoming ambience. With 20000 hours life these lamps really are 'fit and forget' eliminating the need for frequent and time consuming lamp changes with the associated labour costs. Guests have commented on the new lamps, in particular the smooth dimming and the authentic vintage look.

• Over the life of the lamps the Talbot Hotel will save £39,204 in energy costs • Energy Saving 90%

Annual Savings: Energy 47,500kWh / CO₂ 26,700kg / Maintenance £1000





Case Study Manchester Opera House

A selection of Bell Decorative LED Lamps including GLS, Reflectors, Candles & Pygmy were supplied by CEF Salford as part of a lighting solutions scheme designed to reduce costs and maintenance.

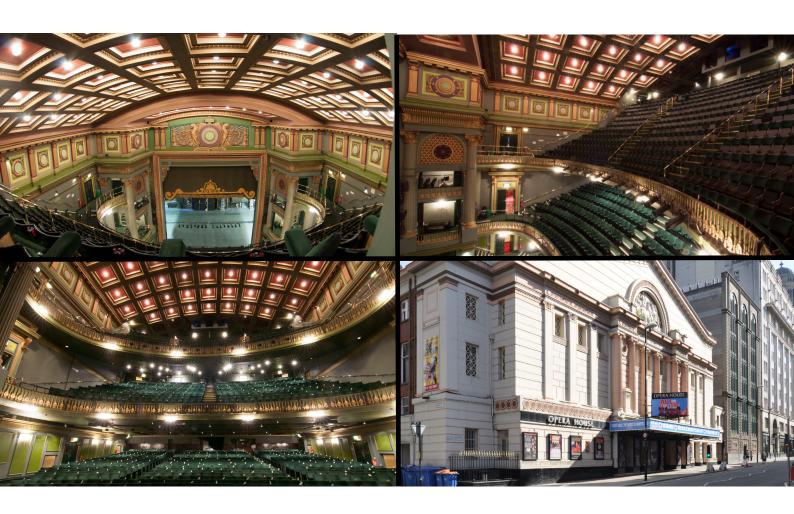
Iconic landmark Manchester Opera House opened 1912, it has hosted prestigious premiers including; 1958 European premiere of West Side Story and the British regional premiere of Andrew Lloyd Webber's musical The Phantom of the Opera.

Opera House spokesperson said: "Our previous incandescent lamps were inefficient and needed constant replacement, the new LED lamps are energy efficient and maintenance free. This means the maintenance crew can focus their resources, rather than having to constantly replace incandescent lamps, some of which are in hard to reach places".

We are delighted with the new lamps particularly the dimming performance, in addition to the cost savings the lamps help to create a welcoming atmosphere which is important for both performers and audience".

• Over the life of the lamps Manchester Opera House will save £30,184 in energy costs • Energy Saving 83%

Annual Savings: Energy 26,317kWh / CO₂ 14,737kg / Maintenance £1200





Case Study Piccolino e Vino, Glasgow

BELL Pro LED 7W Dimmable GU10 lamps chosen to replace 50W Halogen Lamps

The BELL PRO LED GU10 was specified as a retrofit to standard 50W GU10 lamps, to increase light levels and save energy in this prestigious city centre location.

The BELL LED lamps were specified due to their compatibility to work with the GRAFIK Eye digital dimming system, and endorsed by Lutron control systems. It was essential to create a smooth dimming cycle down at low level illumination and other LED lamps trialled could not achieve the performance required.

- Over the life of the lamps Piccolino e Vino, Glasgow will save £23,220 in energy costs
- Energy Saving 86%
- Annual Energy Saving 187.82kWh
- Annual CO₂ Saving 15,777kg
- Annual Maintenance Saving £600





Case Study Shibden Mill

BELL products help Shibden Mill win Silver Green Tourism Award

For over 350 years The Shibden Mill Inn has been at the heart of life in West Yorkshire's Shibden Valley. It's a magical place where generation after generation of locals have enjoyed time well spent with friends and family, sharing in life's special moments and shaping memories to last a life time

BELL distributor (JG Harrison) carried out a full survey of all Shibden Mill Inn's interior and exterior bulbs and replaced them with energy saving LED alternatives.

- Over the life of the lamps Shibden Mill will save £22,136 in energy costs Energy Saving 89%
- Annual Energy Saving 1,128kWh Annual CO₂ Saving 12,487kg Annual Maintenance Saving £650





Case Study Country House Hotel, Derby

Standing in over 400 acres near the Peak District National Park, this prestigious hotel, leisure facility and golf club has recently installed BELL Retro Vintage Fittings and Vintage Lamps as part of a bar and dining area refurbishment.

Stunning results have been achieved by using BELL LED Retro Vintage Pendant Lamps, these lamps are 'on trend'. With a special amber finish emitting a soothing, warm, welcoming light, bathing the room in a beautiful, golden light.

The 4W Vintage Lamps offer ten times the lifespan of traditional incandescent lamps along with the associated energy savings. To add to the vintage feel the lamps were installed into large industrial fixtures and the BELL matt black cage accessory from the Retro range of fittings and fixtures was also supplied.

Hotel spokesperson said: "We are very pleased with the new vintage lamps, sourced from Edmundson Electrical Derby. The lamps have a life of 15,000 hours they are almost maintenance free, offer smooth flicker free dimming and add a new exciting dimension to our recently refurbished bar and dining area."

• Over the life of the lamps the Hotel will save £1,944 in energy costs • Energy Saving 90%

Annual Savings: Energy 4,717kWh / CO₂ 2,642kg / Maintenance £300





Case Study 3Arena, Dublin

Originally opened in 2008, with a capacity of 13,000, 3Arena was once named the 5th busiest music arena in the world. Since then, 3Arena has hosted award winning artists and shows.

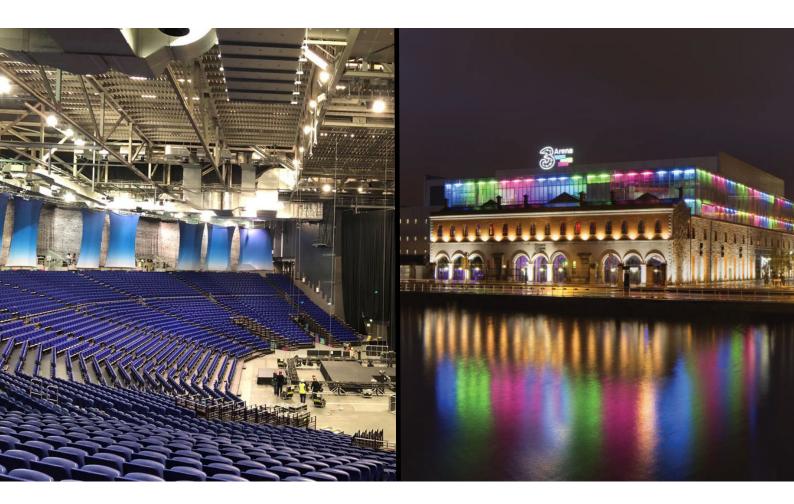
The structure and design of the building has enabled 3Arena to offer a fantastic view from every seat. Multiple Skyline Elite Floodlights, with a custom dimming solution, were specified and installed to ensure the stage and surrounding areas could be illuminated to the optimum level for house lighting and pre production "set building" lighting. With a mounting height of 20m BELL 30° Floodlights achieved 200lux on stage and an average of 135 lux in seating and surrounding areas.

3Arena representative, Kevin Mcdonnell said: "Installing 30 Skyline Floodlights will result in a significant saving on maintenance due to the Skyline's 70,000 hour life. The hefty cost of changing fittings with a fitting with lesser life would be costly due to the equipment needed and the challenging 25m roof height"

Phase one of this lighting overhaul is now complete, with another 60 Skyline Elite Floodlights due to be installed in the coming months.

• Over the life of the fittings 3Arena will save €72,450 in energy costs • Energy Saving 63%

Annual Savings: Energy 21,840Wh / CO₂ 12,230kg / Maintenance €1000





Case Study Blacker Hall Farm

BELL Decorative LED Vintage Lamps; Squirrel Cages & Globes, along with Firestay Downlights were supplied by Norcroft Energy as part of a lighting solution designed to enhance the selling space, provide a welcoming atmosphere for customers and reduce energy costs and maintenance.

Blacker Hall Farm opened the doors to it's 400 year old barn and welcomed it's first customers in 1999, five generations of family farming are the back-bone of the Blacker Hall business, around 75% of what is sold is made at the farm.

Karen Close Retail Manager said: "The new lighting design has proved an instant success with both staff and customers alike. The downlights provide crisp clear illumination around the till area and product shelves, while the vintage lamps add warm welcoming light and a retro feel. The quality of light is excellent and the lamps and fittings are maintenance free".





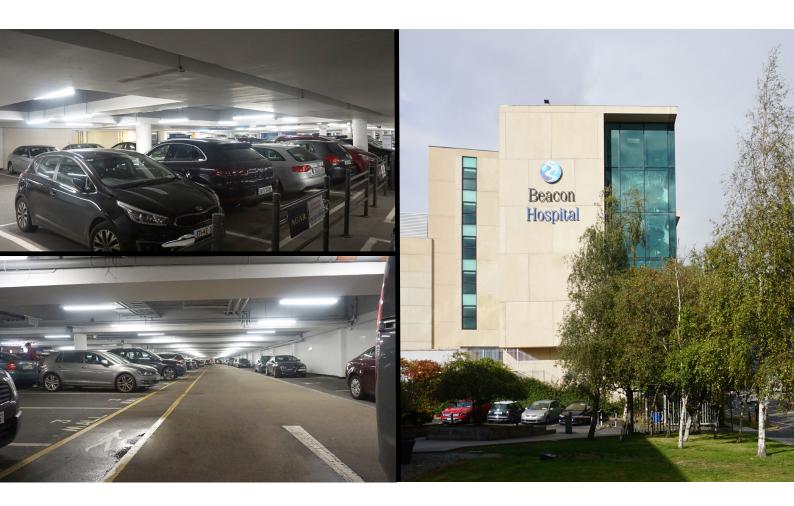
Case Study Beacon Hospital & Hotel

Opening in 2006, located in South Dublin, Beacon Hospital is one of the most advanced private hospitals in Europe, with over 1300 Consultants, nurses and healthcare professionals. Beacon Hospital provides 24 hour, world-class acute care services.

Over 850 BELL Dimmable Dura Battens were installed throughout the main through routes and walkways of the carpark to enhance the safety of Beacons guests.

With no movement the lights dim to 10% of maximum light output. This enhances the guest's perceived safety while preserving energy. On/Off sensors were added to the carpark parking bays, illuminating to 100% light output while guest's park their cars, then switching off once the guest has safely parked their car.

A Spokesperson said: "The Dura Battens were a great choice for this project, living up to its name it's by being tough and vandal resistant, but it also gives out just the right amount and quality of light and is super economical to run".







Vauxhall Assembly Plant, Luton

There has been a plant at Luton building vehicles since 1905, currently employing 1,400 staff. The plant assembles Vauxhall, Opel, Peugeot and Citroen vans. The next-generation Vauxhall/Opel Vivaro van will use PSA's new EMP2 platform, this will allow the factory to also build Peugeot's Expert van and Citroen Dispatch vans.

BELL Ultra Battens were specified and supplied by PLS Lighting. These were installed by the in-house maintenance teams in the assembly area, body shop, press shop, spray shop and quality control.

James Hall, Facilities Engineer said: "The Ultra Battens from BELL were the best choice for this project, not only do they earn their name by being ultra reliable, but they also give out light at the correct colour temperature and are economical to run. The BELL units fitted the bill perfectly, offering a bright crisp light to illuminate working areas which is essential for the safety of our employees. Once installed these units are 'fit and forget" with a life of 50,000 hours and a 5 year guarantee.

• Over the life of the fittings Vauxhall will save £2,159,231 in energy & maintenance costs • Energy Saving 64%

Annual Savings: Energy 1,228500kWh / CO₂ 687,960kg / Maintenance £21,000



British Electric Lamps Ltd

BELL House, Normanton Industrial Estate Normanton, West Yorkshire. WF6 1TN



Case Study Odeon Cinema Newbridge

Founded back in 1930, ODEON is the largest and best-known cinema chain in the UK and Ireland, and, famous the world over, ODEON Luxe Leicester Square has hosted over 700 of Europe's biggest film premieres since the 1930s and it's now the first Dolby Cinema™ in the UK

Located in Whitewater Shopping Centre, Newbridge, Co. Kildare, Ireland boasting state-of-the-art cinema where you can enjoy all the latest blockbusters in 2D and 3D with an extensive range of food and drink for you to choose from..

Odeon Cinema representative, said: "BELL lamps & fittings were chosen due to their unrivalled reputation for correct colour & reliability. Safety is paramount for customers when entering and leaving the screenings, the ability to accurately control the light levels via a dimmer ensures the auditorium is sufficiently illuminated for customers to find their seats, when dimmed during the screening they emit a subtle light without effecting the quality of customers viewing experience.

• Over the life of the Lamps & Fittings Odeon Cinema Newbridge will save in £864 in energy costs • Energy Saving 67%

Annual Savings: Energy 1,258kWh / CO2 704kg / Maintenance £300







Maryland Gaelic Athletic Association

Skyline Elite Asymmetric LED Floodlights installed at Maryland GAA.

Maryland GAA is a Gaelic Football club based in Drumraney, Ireland. Founded in 1957 Maryland GAA have a rich history in the Westmeath Intermediate Football Championships. To enhance their pitch and training facilities, Maryland GAA recently updated their lighting to ensure they have the correct light levels for both training and match day events.

A detailed lighting design scheme was compiled by the BELL Lighting Design Team and the Skyline Elite Asymmetric LED Floodlights were selected to be the perfect luminaire for the upgrade.

Inefficient Metal Halide fittings were replaced with 32 Skyline Elite Floodlights mounted onto 8x 12m columns providing the desired lux level to ensure the team can perform at their highest level. With a 7 year guarantee & 2 year on-site warranty, maintenance will be a thing of the past. Over the life of the luminaries, Maryland are set to save a large amount of money, while greatly reducing their carbon footprint.

Annual Savings: £8147 / CO₂ 688kg / Maintenance £600 / Energy Saving 40%







The Change Foundation Cricket Centre

The Change Foundation is an award-winning charity that uses sport to change the lives of marginalised young people. They deliver targeted long-term interventions for the most vulnerable young people through Coach Mentors with lived experience, providing regular sport, personalised mentoring and work-related opportunities.

A detailed lighting design scheme was compiled by the Power Plus Group Lighting Design Team, and BELL 150W Illumina Slim High Bay's with the UGR Honeycomb lens was selected to be the perfect luminaire for the upgrade.

The 36 original fittings were replaced with $18 \times 150 \text{w}$ fittings. This reduced the rows of fittings to 2 which is a great advantage as there are only 2 lanes so the new fittings did not interfere with the netting installed between the lanes.

The real benefits were; less energy consumption, reduction in glare rating and an improvement in lux levels from 500lux to over 950lux. The combination of these factors means that the players can practice in safety with lighting that delivers high definition, high luminance, low glare and accurate colour rendering.

Annual Savings: £9419 / CO₂ 1468kg / Maintenance £600 / Energy Saving 32%





Devon Contract Waste

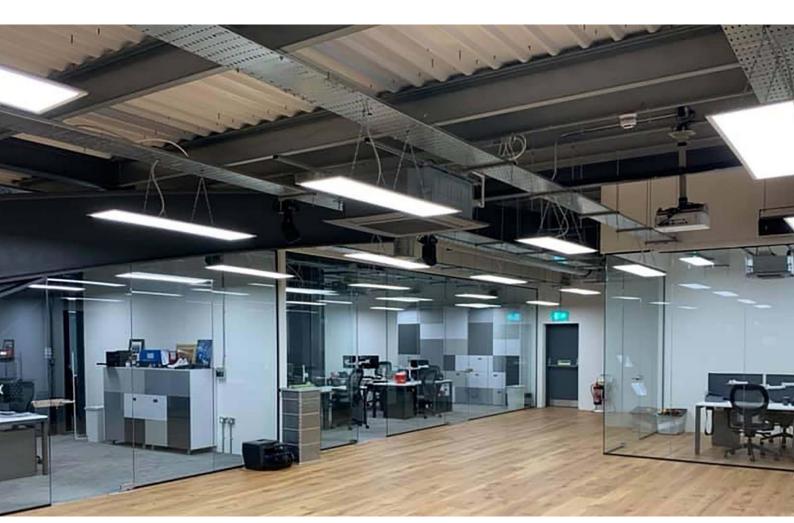
We were invited to site & challenged to come up with a solution & lighting design for the Head Office of Devon Contract Waste.

The contractor Jason Burford – JJB Electrical advised that the client wanted to maintain an 'Industrial' feel throughout the site and it was paramount we provided a solution which allowed the metal trays to be visible.

Devon Contract Waste didn't want to use battens as these would not give the desired aesthetic, and options for downlights cut into the tray we deemed too labour intensive.

Suspended panels were given the green light, Jason agreed to increase the tray size to 300mm, a lighting design was supplied using mainly 1200x300mm Arial Panels which achieved a nice line of light running along the trays.

A mix of 1200x600mm, 600x600mm & 1200x300mm panels were used in the corridors, canteens & other spaces, maintaining continuity throughout the site. The Luna up/down fittings provide acent lighting on the stairs, and ensures illumination for the safe passage of staff and visitors.





Boldon Lawn Tennis Club

Boldon Lawn Tennis Club has been at the heart of Boldon since 1886. With 6 outdoor courts, this family friendly club caters for all levels of tennis from grassroots to competitive tennis.

To ensure the tennis club provides the best facilities possible for its members, they reached out to Powerplus Group to aid with a lighting upgrade. The brief was simple; install high output energy efficient lighting, to increase the clubs' playing hours, while reducing their energy bills & carbon footprint.

The first phase of the project, saw 3 of the 6 courts illuminated with BELL Skyline Elite Asymmetric Floodlights. As the tennis club is located in a small village, there were inevitably restrictions in place with regards to lighting spillage. The BELL Skyline Elite Asymmetric floodlight was chosen to alleviate any light trespass and glare into the surrounding properties.

Due to the layout of the tennis club, 2 of the 3 courts were illuminated using a standard corner/side lit scheme. The remaining court presented a few more challenges, as lighting could only be installed at one side of the court. The Skyline Elite Asymmetric Floodlights made "light" work of this and easily achieved the recommended LTA lighting level..

- Over the life of the fittings Boldon Lawn Tennis Club will save £879,323 in energy & maintenance costs, Energy Saving 60%
- Annual Savings: Energy 49,140kWh / CO2 27,518kg / Maintenance £600





Case Study Stoke Poges Lawn Tennis Club

Established in 1949, Stoke Poges Lawn Tennis Club has been at the heart of South Buckinghamshire for many years. The tennis club has seen many changes over the years, none of which bigger than the installation in three artificial grass courts in 2015. At the point of installation in 2015, two out of the three tennis courts were floodlit, to facilitate "all year-round tennis".

Stoke Poges Lawn Tennis Club's most recent upgrade took place in early 2021. With energy efficient lighting at the top of most sports club's agenda, it was decided that a lighting upgrade was necessary not only to reduce their carbon footprint but to also safeguard the club's popularity & growth. To minimise disruption to the tennis club and to keep costs to a minimum, it was decided the existing lighting columns were going to be re-used for the lighting project. This meant that the BELL Lighting Design Team needed to produce a bespoke design tailored around the existing columns while ensuring the lighting levels were still equal to or above the correct standards.

BELL Lighting Skyline Elite Asymmetric LED Floodlights were specified and installed by Powerplus Group. Initially only two of the three courts were floodlit, but due to increasing popularity, it was deemed necessary for a 3rd court to also be illuminated to increase the amount of tennis that can be played during winter nights. Having 3 courts illuminated during the winter months will give the tennis club the ability to increase membership numbers and therefore increase revenue to help support the club's future development.

- Over the life of the fittings Stoke Poges Tennis Club will save £494,613 in energy & maintenance costs, Energy Saving 60%
- Annual Savings: Energy 49,613kWh / CO2 13,548kg / Maintenance £600





Case Study Drumbo Park Stadium

Drumbo Park plays host to a Dog Racing Track, offering a live racing event every Saturday evening. With a large grandstand suitable for a considerable number of guests at any one time, it is vital that conditions for racing and hospitality are up to scratch.

Nicholas Rose, Commercial Director, said:

"The quality of light was a huge factor for the project, not just the potential substantial saving in our ongoing electricity bills and a reduction in the available charge we pay as a large commercial user. We heard horror stories of other stadiums having to revert to Halogen because the LED lights they installed didn't provide the required quality of light. We were recommended to work with BELL Lighting and they worked closely with us to devise a solution that has not only saved us a fortune but has actually improved the quality of light around the track. We are now able to turn the lights on and off in between races to increase the drama of our race nights. Also, their careful installation has focused the light on the running service rather than the grass banking around the track. The overall result is superb and customer service throughout the process was excellent. I cannot recommend the BELL Lighting team highly enough to other stadiums and high use commercial users."

Annual Savings: £30,643 / CO2 19,051kg / Maintenance £5000 / Energy Saving 50%





Case Study G & H Stainless Ltd

G & H Stainless Ltd. are stainless steel and alloy bar stockholders and processors, and the team have been in the steel stockholding and processing industry for over 35 years.

G & H Stainless decided that a lighting upgrade was needed, as they recently acquired new machinery which could allow for greater precision in steel cutting and works. These activities would require detailed work which would in turn necessitate high levels of lighting. There was also an opportunity to save money on energy costs and reduce impact on the environment, which the company were keen to pursue.

BELL Lighting replaced linear fluorescent fittings with our 200W Illumina Muto LED High Bay, whilst also providing a new emergency design using LED High Power Emergency Bulkhead products. Working closely with Smith Bros, Doncaster, the project was designed and supplied within days of the enquiry being received.

Keith Whittaker, spokesperson for G & H Stainless, said:

"Morale has definitely improved thanks to the new lighting. We're shocked by the change, we didn't expect the difference to be as big as it is. The warehouse feels safer, the working environment is better, and staff can see finer details when cutting steel or doing precision work. We're delighted with the end result."

Annual Savings: £55,440 / CO₂ 7,056kg / ROI 7 Months / Energy Saving 47%





Case Study Boston Spa Tennis Club

We recently visited Boston Spa Tennis Club in Yorkshire, where we have installed our Skyline Virtus LED Floodlights across three courts at the venue.

Boston Spa Tennis Club has over 100 members, providing both social and competitive team tennis opportunities to those involved with the club. Boston Spa has four all weather courts, allowing for play throughout the year, and lighting is vital to ensuring that play can continue into the late winter evenings.

We replaced the previously installed Metal Halide Floodlights with our Skyline Virtus, resulting in a >60% energy saving and a reduction in spillage. The previous fittings had also caused issues due to moving when winds were high, creating glare and poor conditions for play; members at the club confirmed this has stopped thanks to our installation.

Annual Savings: £69,300 / CO2 2,466kg / ROI 41 Months / Energy Saving 60%





Stoney Stanton Lawn Tennis Club

Stoney Stanton Lawn Tennis Club was formed in 1962 with the enthusiasm and determination of a few dedicated villagers, some of whom are still active members of the club today. From fairly modest beginnings, with two shale courts, the club has evolved significantly over the years.

Now boasting four courts, with three courts being available for use up until 10pm in the evening thanks to Floodlighting, Stoney Stanton Tennis Club is an established institution with over 150 members.

We recently visited the club, where we have installed 28 Skyline Virtus LED Floodlights across three courts. Whilst all of the installed Floodlights are in use, our products result in >400 lux average illuminance across the Proposed Playing Area, and >300 lux average illuminance across the Total Playing Area. The lighting design which our team produced for the project also complied with ILP GN01/21 where obtrusive light was concerned.

Members from Stoney Stanton Tennis Club joined us for our visit, and they were supportive of the lighting upgrade, stating that the change from the previously installed 36 400W Metal Halide Floodlights had resulted in an even spread of light, better lighting levels more generally, as the previous fittings were not all working, and a more positive experience as a whole thanks to the immediate nature of the lights coming into use. The previous fittings had been slow to turn on, whereas our Skyline Virtus products are instant and require little to no maintenance.





Wellingborough School Car Park

Wellingborough School has a rich heritage and a long distinguished history. Originally founded in 1595 as a boys' school, Wellingborough School is now a two-tier school, with a Preparatory School and a Senior School forming the basis of the institution.

We recently visited the school to assess several areas where the lighting could be enhanced in order to improve the safety and atmosphere of this exceptional organisation. The first area where we have provided support is the Car Park, as this was a space which needed a new lighting installation for safety reasons.

We utilised 10 of our Skyline Virtus 150W Asymmetric Floodlights, mounted on 8m columns which were supplied by BELL Lighting, in order to vastly improve the lighting levels which were present in the area. We also provided glare, upward light, and horizontal spillage figures for the school to consider. This was particularly important, as the school is situated near a busy main road, meaning that spillage could not impact vehicles in the surrounding areas.

Thanks to the quality of our new installation, we are now working on other areas of the school, and we look forward to sharing more in the future.





Darkside Developments

We recently visited Darkside Developments in Barnsley, a VAG and BMW Diesel Tuning company, with dealers all over the world. Darkside Developments was founded in 2010, and the company has grown rapidly in the last decade, reaching 100,000 subscribers on YouTube in 2022!

We are supporting Darkside Developments with a host of lighting improvements across their site, starting with their Warehouse and Industrial areas. Our Illumina Atlas LED Wattage Switchable High Bay was used for this lighting upgrade, replacing failed LED units which were previously in place, and allowing for further efficiency thanks to the quality of our new products.

The Illumina Atlas boasts a variety of notable features, from 60W to 200W wattage switchable functionality and a luminous efficacy of 145 lumens per watt, to sensor and emergency options available if required. The product is the perfect alternative to Metal Halide or Sodium.

We look forward to sharing further images of more lighting replacements in the near future.





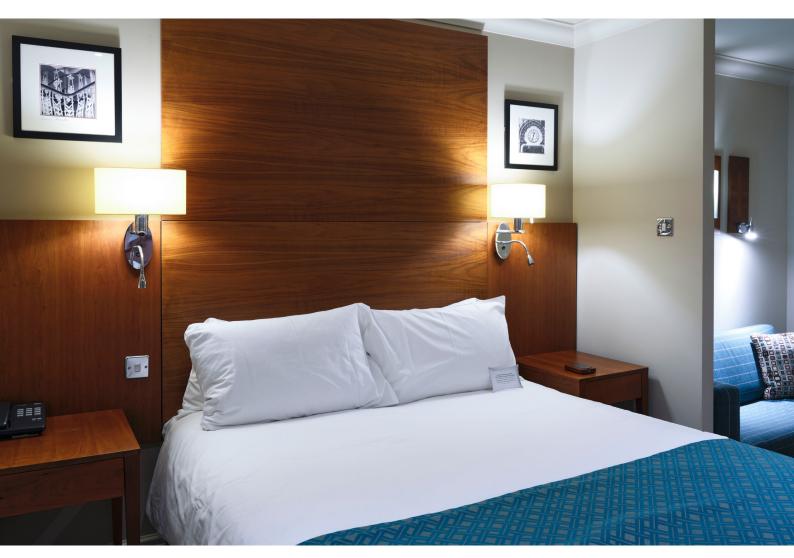
Thorpe Park Hotel & Spa

Found on the edge of Leeds, Thorpe Park Hotel & Spa is ideal for visiting the city, with an award-winning spa and an AA Rosette restaurant with friends and family.

Thorpe Park Hotel & Spa is part of the Daniel Thwaites PLC group, and the business holds many of the same principles as BELL Lighting, with sustainability and family values at the heart of what they do.

Working closely with Mico Lighting and Thorpe Park, we have been involved in the supply of hundreds of products in the Hotel, and the focus of this case study comes in the form of our innovative Smart Lighting products. This new solution is something which we are developing within our range, and Mico Lighting have been at the forefront of our work in the space, showing a desire to provide a more effective solution in the Smart Lighting arena.

Our Smart Lighting offer works using an application which allows for dimming, colour changing, and with selected products, RGB adaptive options. Our Smart Lighting has been installed in volume throughout Thorpe Park, and the images here show some of the features our products can allow for. A further video of the dimming and colour changing characteristics which our Smart Lighting provides can be found across our Social Media pages.





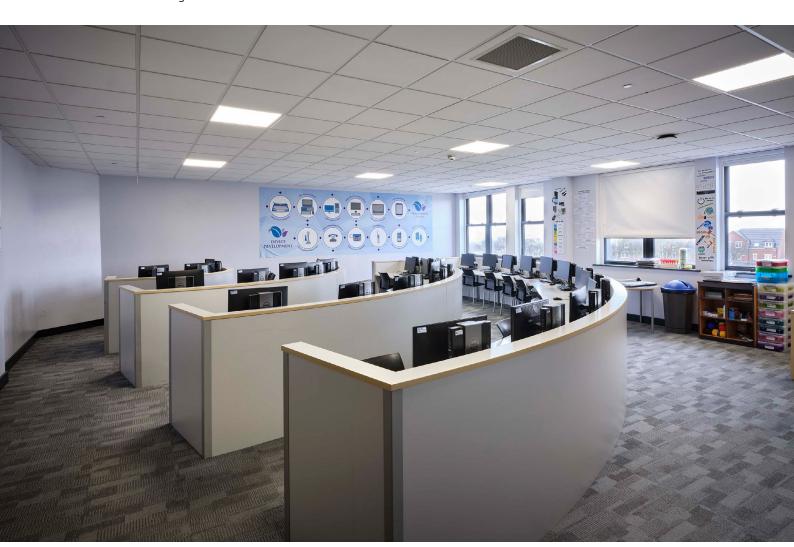
North Durham Academy

North Durham Academy is a highly ambitious institution which supports the local community. The Academy boasts over 1,000 students and is a modern building, at just over 12 years old.

BELL Lighting were the chosen manufacturer for a full lighting upgrade, with 2,394 fittings replaced in total at the site across a period of around 6 months. The upgrade included replacements to a host of areas, our Illumina Linear UGR LED High Bays provided outstanding results within the Sports Hall area, with the UGR element of the product being particularly important, as the space is also used for learning and exams. A stunning Theatre saw our 36W Arial Plus UGR<19 Backlit LED Panels at a substantial 9.6m mounting height, with Classrooms also taking advantage of the 25W variant of the product range.

Other product lines included the Deco Grande which was used in Stairwells, our Dura and Ultra LED Battens which were installed in Store and Plant Rooms, with our Arial Pro LED Downlights used in a multitude of spaces, from Corridors to Canteens and Open Areas.

The project was a stunning success, with around a 56% energy saving, and a 2 year payback calculated by the Academy. It was also a real pleasure to see our Spectrum Emergency products installed throughout the Academy, and we are excited to work on future schools in the area moving forwards.





Edmundson Electrical Doncaster

We are proud of the fantastic relationships which we have with our customers. The trust which our customers have in us was exemplified recently, when Edmundson Electrical, Doncaster, installed our products in their Warehouse and Trade Counter areas.

It was an honour to be chosen by Edmundson Electrical, Doncaster, above our competitors, as their lighting manufacturer of choice for the project. We pride ourselves on the customer experience which our partners receive, and we know that our products are high in quality.

Our Arial Multi Backlit LED Panels were used for the Trade Counter side of the installation, with 18 fittings used in the area. Alongside this we also supplied 25 of our Illumina Atlas LED Wattage Switchable High Bay within the Warehouse.

The fittings look outstanding in action, and we are delighted with the results.





LCR Engineering Ltd

We recently visited LCR Engineering Ltd, a complex fabrication and manufacturing business in Hull, known for working on notable projects such as the Shard Canopy/Spire and the Tottenham Hotspur Stadium, under the previous company name 'Matt Engineering'.

Our products have been used to produce outstanding results in a manufacturing area at LCR Engineering, with 42 of our Illumina Atlas Wattage Switchable LED High Bay products used alongside our High Output LED Emergency Bulkheads and Exit Signs.

The project was particularly striking, as the area was subject to an unfortunate incident prior to the installation, where the area had been lost due to a fire. The turnaround is striking and we are glad to have been a part of the positive change.

We worked alongside John A. Hayward Ltd and Electric Center, Castleford, in order to provide a solution, and comments from both companies are shown below:

"We started working with BELL Lighting on the back of the quality of their emergency lighting products, and from there we have built strong relationships within the company. We almost exclusively use BELL, and there's a reason for that. It matters to us that we work with good people, where we have positive relationships. Alongside that, BELL are a local company that offer high end products which are easy to use, with great warranties. One of the key factors in choosing BELL is also the adaptability and consistency of their products, making their fittings easy to install. BELL make everything simple."

- Andy, John A. Hayward Ltd

"We have a strong working relationship with BELL Lighting, they have always provided a top-class service and they have a great range of quality products on offer too. They are a manufacturer that we can trust to provide market leading lighting solutions for our customers."

- Josh Brown, Manager at Electric Center, Castleford





TUI Airport Hangar

Our products were recently installed at a TUI Airport Hangar in Luton, providing outstanding results in this eye-catching facility.

TUI Group is the world's leading travel company, along with boasting the title of the UK's principal travel brand. Like BELL Lighting, TUI are committed to improving their sustainability credentials, pledging to achieve net-zero emissions across their operations.

Our products were used across the site, with our Illumina LED High Bays, complete with sensors, used in the Main Hangar to provide full control. This was particularly important due to the volume of natural light which penetrates the glass roof panels in place. Our High Bays replaced the original 400W HQI High Bays which were installed, and the improvement in both quality and energy saving is substantial across the site.

Alongside our High Bay offer we also provided an emergency lighting design using our Self-Test LED Bulkhead fittings. Our emergency lighting offer is one which we are extremely proud of, and we work hard to ensure that we place safety at the top of our priority list when designing projects where the full scope of information is given to us.

We also designed the Engine Bay area, where both Linear fittings and LED High Bays were used. The rest of the site was replaced using a point for point LED replacement, with areas like the office and circulation spaces being fitted with BELL Lighting products. Thanks to the savings which are to be made as a result of this lighting upgrade, TUI are now looking at a solar panel installation to give the site full off-grid usage.

Annual Savings: £205,297 / CO₂ 140,132kg / Energy Saving 560,528kWh / Cost Reduction 55%





