

INDUSTRY LIGHTING

Lighting solutions making light work



Balancing well-lit with well-being

In our more than 75 years of being in business, we have gained invaluable experience of and powerful insights into the industry sector. We can bring our perspective on this varied and specialised area to meet the commercial and health and safety needs of our clients and their people.

And the benefits that come from our experiences and insights are plainly visible to all.

We provide a critical element in all of today's industry environments, as we are responsible in helping create a working environment that is both conducive to high productivity and also safe in which to work and move around. We also take into consideration the impact one of our solutions can have on the total cost of ownership of a project, embracing factors that include capital costs, energy costs, reliability, ease of maintenance and, increasingly, sustainability and circularity – all with the aim of their cumulative impact on productivity levels.

Our lighting solutions, including controls, not only provide the flexibility that industry demands, but also the technical specifications that suit the latest building techniques, and reduce installation

time whether in rapid on-site programmes, modular off-site builds or in refurbishment projects.

If you want help, advice and inspiration for your lighting projects, are deciding who to work with to help realise your vision or are wanting to know more about products and their technical specifications; we can satisfy your requirements.

We can provide lighting solutions that are perfectly matched to the needs of a wide variety of industry applications – ones that we are proud to manufacture through our facilities here in the UK, sourcing our materials through our UK supply chain, and which are then tested in our own laboratories.

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4 INDUSTRY PILLARS

Four ways we bring light to industry

Regardless of the nature of the industry, all our lighting and control solutions are built on our four pillars.

These are the key areas we consider when we design products and lighting schemes.

Light quality

The main purpose of any lighting scheme is to enable people to undertake their task effectively in a comfortable and safe environment.

It is the wellbeing of those using the space that is paramount in any industry setting, as many of these environments have heavy/moveable equipment and so the need to see clearly is critical to the safety of the operatives, but balanced with this is consideration for worker welfare – if the light is too intense, it can cause glare which is not only potentially dangerous, but which can have a negative impact on physical and mental wellbeing.

Glare control also has an important part to play in quality control areas which may also require higher colour rendering, and areas where staff are using screens such as control rooms and offices.

Installation and accessibility

Simple to install and accessible for maintenance: the two prime aims we look to satisfy in all our lighting solutions.

Industry spaces are often characterised by high ceilings and are often used around the clock so installation can be time consuming and costly. Gaining access for maintenance is also a key factor in our thinking and planning.

Where possible, we use luminaires with long driver lifetimes and that have been tested to appropriate ambient temperatures to minimise the need for replacement during the installation lifetime.

We also factor in emergency battery operating temperature, location and replacement into all our industry solutions.

To minimise cleaning, we choose an appropriate IP rating best suited to the application.

To minimise installation points, we recommend the use of luminaires with integrated emergency lighting and controls where appropriate.

We support through-life maintenance by our use of high-quality components combined with smart modular product design and integral controls.

High quality means fewer failures, less maintenance, while modular design means easier maintenance or upgrade when required, and integral controls mean less wiring and fewer installation points and fewer points to maintain.

Reliability and durability

In the demanding, often 24 hours a day, operating conditions found in many industry sectors, lighting needs to be both durable and reliable.

In our experience, industry lighting covers everything from warehouses to clean rooms and car parks, with each area having its own particular set of demands.

These apart, lighting should be able to withstand variations in temperature, often requiring a high IP rating to protect from moisture and dirt, and should be manufactured using high-quality, long-life components to minimise maintenance requirements.

Lack of mechanical cooling, the size of the space, heat emissions from machinery and use of rooflights to maximise daylight penetration: these are just some of the factors that can impact on the ambient temperature a light fitting may be operating in.

High ambient temperatures can lead to an increase in driver failure, quicker rates of light source depreciation and, unlike a lot of LED products that do not allow for simple upgrades or replacement of components, our LED solutions do – which is why we specify products that have been designed and tested to withstand higher ambient temperatures and use industry standard drivers.

Environmental sustainability

We believe that lighting solutions should not only use high-quality, long-life, efficient components and technology, but should also be suitable for regeneration at the end of its useful life.

Alongside this, we also believe lighting installations should be energy efficient from day 1, especially as many industry environments are running around the clock, so energy costs are high. As part of our energy saving approach, we advise the use of lighting controls to reduce power consumption in areas where activity is low, such as warehouses and storage facilities.

But energy consumption and its associated cost shouldn't be the prime consideration for any project – lighting quality and longevity of installation are equally important in delivering a balanced and considered installation.

We also take into consideration what happens to the installation in the future when it reaches its end of life – can it be regenerated? How can we minimise waste, lower the carbon footprint, add value to the original asset. Would renewing prove more cost effective than buying new?

The right solution comes as a result of close consultation between all parties involved in the design, installations and maintenance of the lighting solution.

MANUFACTURING

Accommodating people and equipment

Manufacturing across the board is becoming more automated and the machinery and technology used more sophisticated, but people are still required to check, monitor, adjust, maintain, repair and programme equipment and controls.

This demands lighting that reflects the fact that while machinery may not need light to function, the people working around it most certainly do.

The lighting should reflect the size of the space involved: small, medium or large; low medium or high ceilinged. It should also allow whatever tasks are being undertaken by members of the workforce to be carried out safely and efficiently. In instances where there is the potential for a high ambient temperature, care should be taken to ensure lighting can not only work within the anticipated ambient temperature, but can do so for sustained periods of time to ensure a return on investment and peace of mind.

Luminaires should be robust enough to withstand the demands of a manufacturing environment, especially one in which they may be exposed to vibration and the possible ingress of dust.

Lighting and control systems should be flexible to suit changes to processes which demand changes to the lighting requirement.

Good glare control is also vital to ensure the safety of those working in the space and to maintain levels of productivity.

Where appropriate, the design of emergency lighting should take into consideration the need for safe termination of machinery.

Where people and machinery are in close proximity, the primary consideration has to be the safety and welfare of the people.



Flight*



Harrier*



ACL Industry*





LOGISTICS AND WAREHOUSES

Balancing speed, accuracy and safety

Warehousing and similar storage facilities are where 'just-in-time' logistics come to life. Speed is of the essence, closely followed by accuracy.

For the people who work in these facilities, particularly those working through the night, the right lighting solution is essential for their safety – especially where autonomous mobile robots are in use.

Usually characterised by high ceilings and featuring high stacking systems, good vertical lighting should be at the heart of any lighting solution.

Not only does this ensure the best visibility of stored items, a bright, safe environment for workers, but also reduces energy costs by only lighting those areas that need to be lit.

Luminaire selection should provide the correct colour rendition – especially in operations where colour matching and colour coding play a part.

Flicker should be taken into consideration, as it could impact on the use of scanning equipment.

Warehousing and logistics operations often lend themselves to the use of movement- controlled lighting, helping reduce energy costs while keeping people safe when working.



Flight*



Harrier*



ACL Industry*



*Vitality versions are available

CLEAN ENVIRONMENTS

Clear benefits where clean is a priority

A clean environment is critical in many applications. Experience offers us a deep understanding to provide solutions for people that balance protection with performance throughout hospitals, laboratories, production and storage facilities and universities; anywhere a sterile environment is required.

In each application, we analyse the potential hazards, supplying unique design solutions while always considering two constant issues; the maintenance of a seal between the inside and outside of a room, particularly through the ceiling, and the prevention of ingress of small particles which can carry bacteria and contaminate the activity/product within a space.

We developed unique features to ensure our products meet the requirements of clean environments. Features such as using single piece gaskets and aluminium jacking brackets to prevent bacterial contamination from the ceiling void

and minimal front frame fixings for ease of cleaning from below. Other features enable maintenance from above to remove the need to access the lighting from the room side for maintenance.

Alongside cleanliness, we have put equal emphasis on the quality of light our solutions provide, especially considering many clean areas do not have windows or natural daylight. Our use of premium optics with advanced glare control technology allows for worry-free specification and delivers compliance to the most stringent regulatory requirements.



DTFU



Lister



Hygiene LED



CONTROL ROOMS

Getting the balance right

Size, nature of the tasks being carried out, lighting demands: control rooms can be incredibly varied in every respect.

From relatively simple monitoring posts and CCTV operations to large process or signalling centres with multiple control desks, consoles and screens, careful planning is essential to creating the right lighting solution.

Key considerations include the visibility of data, images, graphics and a host of other items of information on screens. Related to this is the visibility of alarm or similar action-demanding messages that require immediate attention. The clarity and visual emphasis on time-critical or safety-critical tasks are also to be borne in mind.

It has to be remembered, though, that operators need to be alert and focused when working, so a balance between visibility of screens and other equipment and the productivity and wellbeing of the people in the control room has to be achieved.

A fixed level of background light has to be established. One that creates a bright and stimulating environment, but which doesn't create a problem with glare or shadowing. There may be a need for local task-related lighting – for operators who need to refer to printed material, for example.

Whatever the solution, it needs to create an environment conducive to those working in it, while allowing screens and equipment to be clearly seen, literally, in their best light.



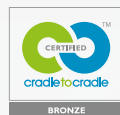
Cascade Flex*



Selene 2*



Lighting Controls



*Vitality versions are available

SERVICE YARDS AND LOADING BAYS

Solutions that allow for transitions

In an industry setting, the lighting of outdoor areas must take into account both the constant movement that goes on – people and vehicles of every size and description. It must also ensure that its impact on the environment, especially light pollution, is kept to minimum.

Under canopies, the lighting solution must take into account that high sided vehicles use these spaces. For this reason, the positioning and height of lighting units must ensure that, when a vehicle is under the canopy, the impact on lighting levels is minimised and allows those loading or unloading to see clearly into and around the vehicle and avoids glare to the drivers.

To ensure safe transitioning between the inside and outside spaces, the light levels should be similar either side of the bay door – day and night.

Within service yard areas, lighting should only be provided where night work is undertaken, and it should be to a level appropriate to the nature of the work being carried out.

Typically, the lighting is mounted around the perimeter of the site, on buildings or where permanent racking can be located off these points.

Once again, the lighting designer should take the environmental impact of providing lighting in these settings.



Sirocco Midi



DATA CENTRES

Solutions as unique as the situation demands

In a world that is becoming more data driven, the number of data centres is growing and, in designing a lighting solution for these demanding environments, lighting designers face some particular, often unique, challenges.

One of the first is lighting spaces filled with data racks, with the solution often being the use of luminaires running down between rows of the racks.

In open spaces, a regular array provides a good working solution.

The ceiling type and mounting height have an effect on the selection of the type of lighting and luminaires, as well as the beam angle, to achieve the desired result.

It is important for the designer to establish the ambient temperature for the hot aisles – in data centres, the temperatures can be as high as 45°C to 50°C.

Product selection needs to come with the appropriate control equipment to operate at these temperatures and lamp/LED life data must be provided at that ambient temperature.

The proliferation of coloured cable found in data centres means that a colour rendition of at least Ra80 should be provided. This will also ensure good colour reproduction where CCTV cameras are used.

Close consultation with the client regarding the provision of appropriate lighting is highly recommended, and particularly emergency lighting, due to the potential for battery failures at such high ambient temperatures. Simple controls including movement sensors should also be considered to allow flexibility for the varying tasks.



Harrier*



ACL Industry*



Lighting controls
and emergency



*Vitality versions are available

MULTI-STOREY CAR PARKS

Lighting that creates a sense of safety

Lighting in a multi-storey car park has many functions to fulfil, but one of the main ones has to be helping make users feel safe as they leave and return to their vehicles.

It must also allow for the safe movement of cars in what is a confined space. It must help reduce crime by ensuring that there are no dark corners.

In entrance and exit areas, the lighting solution has to support the adaptation of the eye to indoor and outdoor light levels through the day, and it is recommended to light these areas to a higher illumination level – which help create a safer atmosphere.

For roof level and outdoor car parks, due to the height of these spaces to the surrounding environment, it is important to consider light pollution within the solution. The environmental zone should be confirmed, where planning does not advise column heights, it's important to keep the height as low as possible, with a maximum of 6m.

When lighting is mounted to walls, fittings with minimal backward light should be used, and luminaires should have 0% upward light to minimise light pollution.



ACL Industry*



Sirocco Midi*



*Vitality versions are available

LIGHTING CONTROLS

Functionality and flexibility that controls running costs

Energy reduction and the cost savings it brings is the most obvious benefit of using lighting controls, but it's not the only one.

Depending on the function of a space and its usage patterns, customising the lighting controls' design to individual spaces supports the overall lighting control strategy and gives users the optimum light levels for them to conduct their work safely and efficiently.

Best practice industry space design will make use of any natural light that is available. Flexible daylight-linked dimming, activated through the monitoring of ambient light levels, will ensure that any available daylight is maximised, and unwanted illumination levels reduced. The use of manual override controls will adapt light levels to the working conditions.

Wireless intelligent lighting control systems offer much more than energy saving in terms of building flexibility, reduced installation costs, ease of use, particularly in areas with higher ceilings, and integration into wider building management systems. Further benefits are delivered by the ability to re-configure the lighting functionality to suit the usage of the building without costly and time-consuming external commissioning.

Lighting control configuration and energy reduction can vary depending on the function of a space and its usage patterns. Customising the controls' design to the individual space will support the overall lighting control strategy and deliver favourable results.



LIGHTING CONTROLS

Wireless Controls Solutions

Air Control

- Based on a 2.4Ghz low energy wireless technology mesh, networking is configured to provide basic functionality through advanced lighting control and scene recall
- Bringing wireless control to areas with higher ceilings, the high-performance mesh networking technology delivers seamless communication without the need for additional gateways

Organic Response®

- Integrated or remotely housed sensor nodes detect motion and ambient daylight levels and transmit and receive infrared messages wirelessly for intelligent decisions about optimum light levels
- Can be customised to provide an interface with building management systems and vital building management information via a web-based portal

Command 9

- Wireless luminaire integrated detector for high mounting
- Features passive infra-red (PIR) occupancy detector and regulating photocell
- Create wireless networked zones
- Ideal for both new build and retrofit installations



Energy Performance

Assess energy consumption by time of day, and day of week, and correlate with occupancy. Also compare energy consumption across functional areas / zones to identify opportunities to trim light levels or dwell times.

Maintenance

Receive real-time notification of luminaire location, usage, faulty fixtures, and status information about drivers and light source.

Emergency Lighting Testing and Reporting

Schedule and record emergency lighting central automatic testing in accordance with local standards to support the scheduling of predictive maintenance.

EMERGENCY LIGHTING

Seen to be safe

While it may never be called upon, emergency lighting provision is an essential element of any lighting solution in an industry setting.

In the event of a power failure, a secure, effective, nondisruptive emergency lighting solution is vital in order to ensure a safe discontinuation of task, evacuation of members of staff and any visitors.

Early consultation with us to discuss the emergency lighting needs will ensure that the lighting solution we provide, including emergency lighting in areas identified as being high risk, will be delivered.

Product selection and system design for the emergency lighting should consider:

- Ease of maintenance
- Flexibility of design
- Parasitic energy consumption
- Minimising patient disruption
- Testing & Reporting

By law, any emergency system requires regular and annual testing. The use of central emergency testing and reporting system can ensure an effective emergency provision is therefore in place at all times.

The Whitecroft Organic Response® Portal allows for simple set-up of scheduling and recording of the emergency lighting system to deliver compliance to BS EN 62034.



Florin High Level

- Standalone luminaire supporting the requirements for high-risk task area emergency lighting
- Features charge indicator with driver, charger and battery
- 3 hour non-maintained
- Long life Lithium Iron Phosphate (LiFePO4) battery



Florin E3 & Florin E3 IP65

- High performance emergency luminaire
- Available as recessed or surface mounting
- Minimum life of 50,000 hours



Emergency Test Systems

- Organic Response
- Air Control
- COMEPS

BASE GUIDANCE DOCUMENT

BS 5266-1
Emergency lighting - Part 1

SYSTEM STANDARDS

BS EN 1838
Lighting applications - Emergency lighting

BS EN 50172
(BS 5266-8)
Emergency escape lighting systems

PRODUCT STANDARDS

BS EN 60598-2-22:
Luminaires for emergency lighting

BS EN 5017
Central power supply systems

BS EN 162034
Automatic test systems for battery powered emergency escape lighting

CUSTOM MADE

Bespoke solutions for particular circumstances

As lighting technology rapidly advances – in terms of luminaires, light sources and controls – so too do the demands designers make of us.

That's why we established our Custom Made facility, with its team of product and engineering designers dedicated to the production of bespoke lighting systems and working in partnership and collaboration with architects and specifiers, their purpose is to turn your vision into reality.

Our custom made products cover everything from completely bespoke luminaires, to match the aesthetics of a building, to solutions to meet your different lighting, power, or size requirements. We can also adapt existing products too, for example, provide them in different colours, materials and sizes.

In short, we can deliver a bespoke solution whatever your requirement. Designing, building, testing and manufacturing to meet your exact specifications.

However, a special solution doesn't mean there needs to be a complicated process to deliver it. We have developed a clear route map, from initial enquiry to full production, taking in feasibility, quotations, sales sketches, customer samples, in house testing and on-site installation.

Custom Made makes sense in so many ways.

CUSTOM MADE MAKES SENSE IN SO MANY WAYS 5 Stages from start to finish

01.

Defining the brief together

02.

Producing quotations and sketches

03.

Developing samples and testing

04.

Delivering the product solution

05.

Supporting you after delivery



READ MORE ON
CUSTOM MADE SOLUTIONS

MEETING NET ZERO OBJECTIVES

Lighting solutions for the circular economy

As the world changes to adapt to new demands made on the impact lighting solutions have on our environment, so too is our thinking.

We are increasingly committed to working in partnership with our customers – wherever they may be in their decision-making process – to achieving higher levels of sustainability, reducing carbon impacts to help achieve the Government target of Net Zero by 2050, and many cases much sooner, while still delivering commercial benefits.

By engaging in a meaningful way, we have developed our approach to circularity that allows us to provide a service for existing buildings undergoing regeneration and decarbonisation.

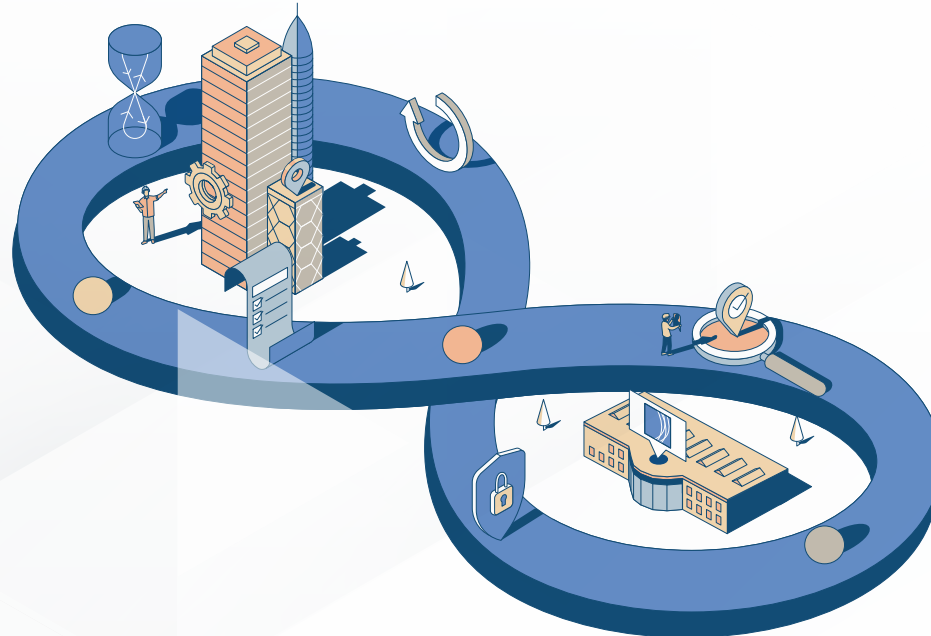
Our Whitecroft Vitality products are designed specifically to help achieve this goal. They are modular, upgradeable and designed to last using high quality components. In addition, they come with complete data transparency in the form of material health EPDs.

Further product integrity and efficacy is provided by accreditation from the Cradle to Cradle® Products Innovation Institute, an independent third party organisation.

Similarly, our Vitality Relight service provides owners of

existing buildings with an opportunity to make significant operational savings, as well as conserving the original embodied carbon associated with a building's construction.

Our partnerships with our customers aren't only to provide the best possible lighting solutions and support in the here and now, but to understand what their needs are for the future and to embark on research and development to ensure we are the number one lighting and controls company to meet those needs.



 [READ MORE WHITECROFT VITALITY PRODUCTS](#)

 [READ MORE VITALITY RELIGHT SOLUTION](#)

EXPERTISE

Delivered with expertise

We pride ourselves on the quality of the lighting solutions, luminaires and controls we deliver.

We are equally proud of the level of advice and consultancy we provide that ensures that our solutions are perfect in the particular situations and applications where they are installed.

It is a level of customer support and advance planning that saves time and money on a project by considering all relevant factors, whether newbuild or retrofit projects.

We can offer expert help on everything from the best techniques to employ designing bespoke lighting solutions and reducing carbon impact.

Highlighting the benefits of our expertise

Just some of the ways our team of experts can help you achieve the perfect industry lighting solution.

Total project solutions

- Indoor and outdoor lighting solutions
- Seamless integration of controls
- Circular and sustainable solutions
- Newbuild and retrofit projects
- Product life cycle assessments
- Bespoke product solutions

Eliminate design risk

- Ensure compliance with standards
- BIM and lighting design
- Capability to deliver large, complex projects

Support

- Regional and national account management
- Project management
- After-sales service



Whitecroft Lighting

A leading light in Sustainability

The industry sector is just one of areas in which we have been at the forefront of sustainability and circularity in UK commercial lighting.

We are one of the leaders in the development of products, lighting solutions and controls that minimise the use of materials and promote reusability through replaceable modular hardware.



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